Message

From: Hengst, Benjamin [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C414E2BF04A246BB987D88498EEFFF06-HENGST, BENJAMIN]
Sent: 12/8/2017 3:23:26 PM
To: Machiele, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b71a67c326714ebbaa72eda552e55282-Machiele, Paul]; Burkholder, Dallas [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=667ef175292d4784997e454a9985b3b3-Burkholder, Dallas]; Michaels, Lauren [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a44e1a5c23404801bd12621455cde517-Reid, Laure]; Korotney, David [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7b00e16e09654b94bc6146550ca87936-Korotney, David]; Argyropoulos, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0149b93d2780437a9c2b6d8477df7991-pargyrop]; Manners, Mary [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ebdb1392504a4b71894970b1a7bb186c-Manners, Mary]
CC: Charmley, William [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fb1828fb00af42ffb68b9e0a71626d95-Charmley, William]; Simon, Karl [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4d781d1ad595415db3a4e768c2d2b3fc-Simon, Karl]; Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]
Subject: FW: Memos assessing targeted relief under the RFS program
Attachments: Deliberative Process / Ex. 5

Just fyi

From: Hengst, Benjamin
Sent: Friday, December 08, 2017 10:22 AM
To: Wehrum, Bill <Wehrum.Bill@epa.gov>
Cc: Mandy Gunasekara (Gunasekara.Mandy@epa.gov) <Gunasekara.Mandy@epa.gov>; Harlow, David <harlow.david@epa.gov>; Baptist, Erik <baptist.erik@epa.gov>; Dominguez, Alexander <dominguez.alexander@epa.gov>; Grundler, Christopher <grundler.christopher@epa.gov>; Orlin, David <Orlin.David@epa.gov>; Josh Lewis <Lewis.Josh@epa.gov>; Dubois, Roland <Dubois.Roland@epa.gov>
Subject: Memos assessing targeted relief under the RFS program

Bill:

We mentioned yesterday two memos that evaluate Deliberative Process / Ex. 5. I've attached them here. Deliberative Process / Ex. 5

The titles:

1. Deliberative Process / Ex. 5
2.

Deliberative Process / Ex. 5

Thanks,
Ben

2018 RFS Final Rulemaking

- EPA should set 2018 standards below the blendwall
  - E85 is not a blendwall solution
  - E15 is not a blendwall solution
  - Carryover RINs should not be relied upon for compliance
- EPA should set feasible Advanced and Cellulosic standards for 2018
- EPA should set a feasible Biomass-based Diesel standard for 2019
- EPA should not grant small refinery exemptions

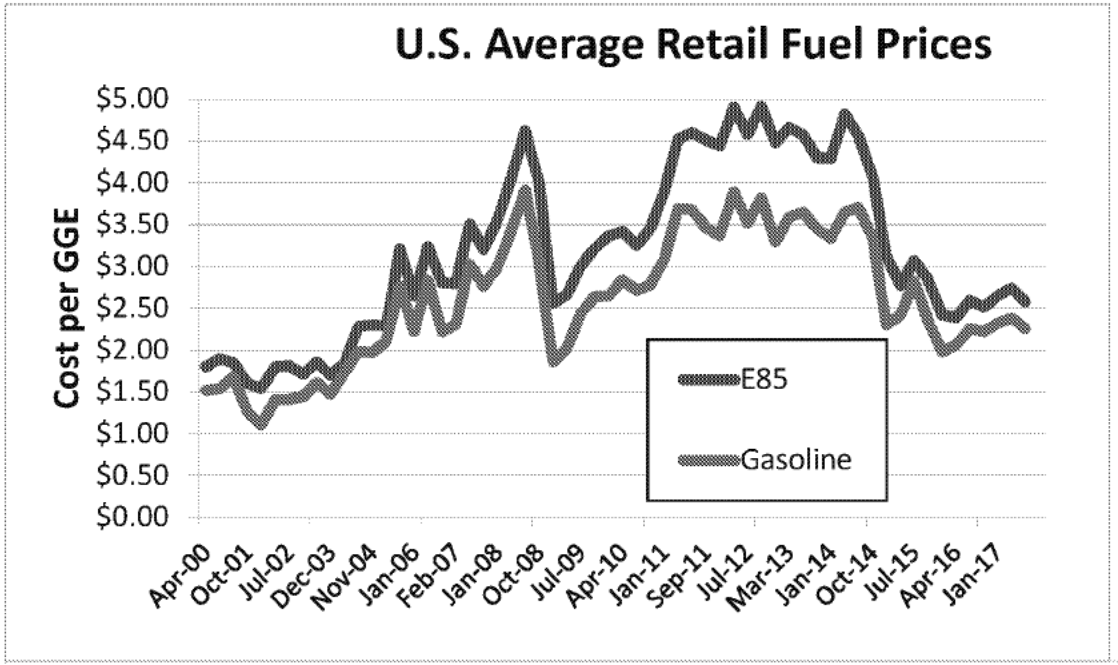
EPA should set 2018 standards below the blendwall

- EPA has authority to waive the statutory volumes
  - Implementing the statutory volumes would cause severe economic harm
  - EPA has discretionary authority to reduce the volumes and is not obligated to implement the maximum achievable volume
- Total ethanol volume should not exceed 9.7% of the gasoline pool
  - Significant E0 demand, estimated by EIA[1] at 5.3 billion gallons or 3.8% of gasoline demand in 2015, *100 fold larger than the combined E85, E15 demand*
  - EPA should use the same E0 methodology outlined in EIA's May 2016 memo[1]
    - EPA would benefit from a clear E0 estimate from EIA each year

[1] Today in Energy, *Almost all U.S. Gasoline is Blended with 10% Ethanol,* May 4, 2016.

E85 is not a blendwall solution

- Only ~ 8% of fleet are Flex Fuel Vehicles (FFVs); automakers reducing number of FFV models
- E85 has lower energy density, not in cost parity with gasoline
- Range reduction: distance traveled on 3 tanks of gasoline requires 4 tanks of E85
- According to fueleconomy.gov data: cost per mile using E85 increases ~9-14%
- Lack of consumer demand: E85 is less than 0.1% of gasoline demand



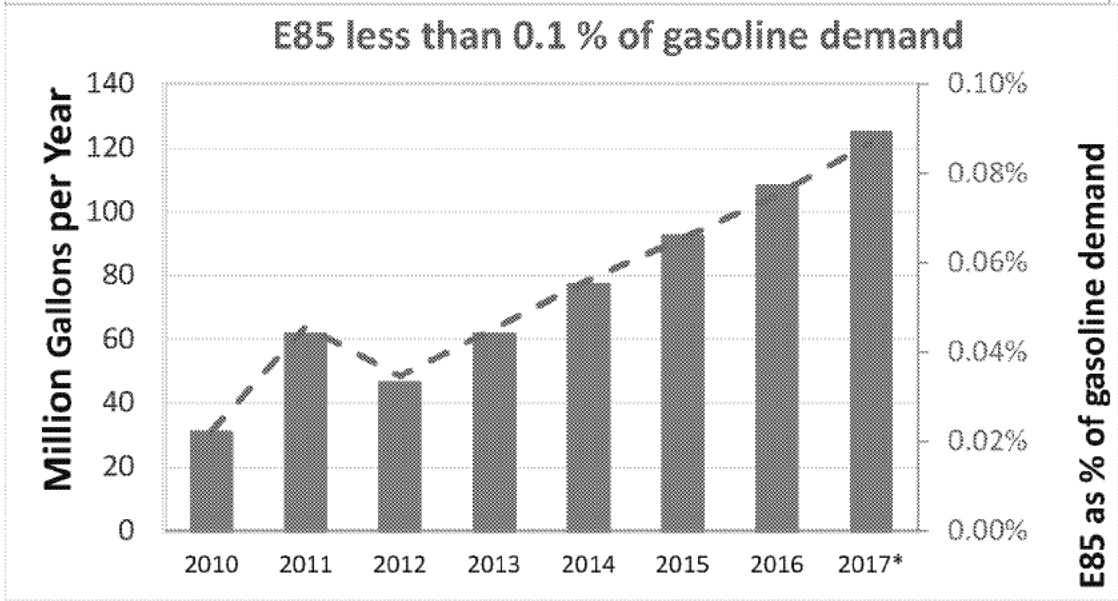


Chart sources: Alternative Fuels Data Center (top) and EIA data (bottom)

*Jan – Aug Annualized

E15 is not a blendwall solution

- E15 has potential liability and compatibility concerns
  - Coordinating Research Council: E15 can cause engine and fuel system damage
  - About 85% of the current fleet (incl. FFV's) was not designed to accommodate E15 based on auto manufacturer owner's manuals
  - GAO: half of the retail infrastructure is incompatible with E15

Manufacturer	Model Year																
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
BMW	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Chrysler	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Most[6]	Most[6]
Ford	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
GM	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Most[4]	Most[4]	Most[4]
Honda/Acura	No	No	No	No	No	No	No	No	No	No	No	No	No	Some[1]	Yes	Yes	Yes
Hyundai/Kia	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	Most[7]
Jaguar/Land Rover	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes
Mazda	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Mercedes	No	No	No	No	No	No	No	No	No	No	No	No	No	No[2]	No[2]	No	No
Mitsubishi	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Nissan/Infiniti	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Subaru	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Toyota/Lexus	No	No	No	No	No	No	No	No	No	No	No	No	No	Some[3]	Most[5]	Most[5]	Yes
VW/Audi/Porsche	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	Yes
Volvo	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

Source: Edmunds.com and auto company statements. See Endnotes for specific model information

Carryover RINs should not be relied upon for setting annual standards

- EPA correctly recognizes that standards should not rely on carryover RINs
  - Carryover RINs are needed to help ensure market liquidity and in the event of unforeseen circumstances
  - Reliance on carryover RINs only provides a short term relief, compounding the blendwall problem in subsequent years
  - Overestimating E85, E15 reduces the ability to carryover RINs

EPA should set feasible Cellulosic standards

- Cellulosic standard should be based on at least three months of actual production
  - About 225 million annually based on most recent 120 months in EMTS
  - DC Circuit Court of Appeals instructed EPA to "aim at accuracy"
  - Production ramp-up projections for liquid cellulosic biofuels have not materialized

EPA should set reasonable Biomass-based Diesel standards

- EPA should maintain the 2018 BBD standard at 2.1 billion gallons
  - Regulatory certainty: companies executed compliance plans in good faith based on Dec. 2016 rule
  - EPA could exercise its BBD waiver authority in 2018 volumes should market conditions warrant
- EPA should not increase the 2019 BBD standard. A lower standard may be appropriate.
  - Reduces flexibility in meeting Advanced standard
  - Stakeholders have raised concerns with feedstock availability and costs

EPA should set feasible Advanced biofuel standards

- Advanced Biofuel standards should be feasible, taking into account feedstock availability, renewable fuel production and blending infrastructure
  - The volume of Cellulosic biofuel waived should be fully applied to the Advanced and Total Biofuel categories
  - The Advanced Biofuel Standard should equal the BBD standard + Cellulosic + a small volume of expected other advanced production

EPA should not grant small refinery exemptions

- Ten years into the program, small refineries and small refiners have had ample time to adjust
  - Small refiners/ refineries were completely exempted from the program through 2010
- Exemptions do not avoid a hardship, but rather provide a windfall
  - Exemptions create RIN market uncertainty
  - Exempt parties receive an unfair market advantage
- If exemptions are granted, EPA should change its approach:
  - Small Refinery exemptions currently increase the RVO for non-exempt refineries if approved prior to setting standards
  - The unfair market advantage of having no RIN obligation is compounded by reallocating that exempted volume to other obligated parties
    - If granted, exemptions should reduce the overall volume requirement

Endnotes

Slide 4:

E15 Chart Sources:
http://www.edmunds.com/ownership/howto/articles/120189/article.html
and auto company contacts

[1]Accord, Civic, Crosstour, CR-V, CR-Z, Insight, Odyssey, Pilot; Acura: ILX, MDX, RDX, RLX, but not TL, TSX, TSX Wagon

[2]Some owner manuals for 2014 and 2015 incorrectly stated that E15 was allowed.

[3]Avalon, Camry, Corolla, Highlander, iQ, Prius, RAV-4, Scion tC, Sienna, Venza; Lexus: CT200H, ES350, GS300/350, GS450H, IS250, IS350, LS460, RX350, RX450H, but not 4Runner, FJ Cruiser, Land Cruiser, Sequoia, Tacoma, Tundra, Yaris; Lexus: IS250C, IS350C, IS F, GX460, LX570

[4]Not Chevrolet City Express

[5]Not FR-S, xB (model discontinued after 2015).

[6]Not Dodge Viper

[7]Not Hyundai Santa Fe, Kia Optima

Message

From: Parsons, Nick [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=7BA9A64331B0449A93CCC46F74D5D1F0-PARSONS, NICK]
Sent: 7/28/2017 2:45:05 PM
To: Machiele, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b71a67c326714ebbaa72eda552e55282-Machiele, Paul]; Burkholder, Dallas [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=667ef175292d4784997e454a9985b3b3-Burkholder, Dallas]; Korotney, David [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7b00e16e09654b94bc6146550ca87936-Korotney, David]; Argyropoulos, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0149b93d2780437a9c2b6d8477df7991-pargyrop]; Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]; Michaels, Lauren [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a44e1a5c23404801bd12621455cde517-Reid, Laure]
Subject: CVR News

Perhaps our next large refiner exemption request? From Politico's Morning Energy:

ICAHN GETS BEAT IN RFS CREDITS MARKET: Carl Icahn's CVR Refining lost $19 million in the second quarter of 2017, and it laid the blame for the loss on spending $106 million on credits needed to comply with the Renewable Fuel Standard, according to its income statement released Thursday. Reuters had reported that Icahn had been holding fewer credits than needed on the expectation that RIN prices would drop, a move that worked in the first part of the year. But prices have jumped from roughly 34 cents a credit to 80 cents a credit, and CVR took it on the chin. "As I've said many, many times before, RINs continue to be an egregious tax on independent refiners and small retailers," CVR CEO Jack Lipinski said on the earnings call. "RINs prices have been extremely volatile this year, which only proves the fact that RINs market is manipulated...EPA continues to ignore this."

Nick Parsons • Chemical Engineer • Office of Air and Radiation • U.S. Environmental Protection Agency
734.214.4479 • parsons.nick@epa.gov • 2000 Traverwood Dr, Ann Arbor, MI 48103

"No man is more important than the team." -Bo Schembechler

OTAQ Fuels Update with Mandy, Sarah

7.20.2017

AGENDA

- RVO rule
  - Public hearing
    - Statement
    - Participation from 3rd floor
    - Coms
  - Final rule
    - Options
- PES letter
- ESA Lawsuit from Sierra Club
- [Small refinery hardship update]

Message

From: Industrial BIOtech SmartBrief [bioie@smartbrief.com]
Sent: 5/30/2018 6:37:07 PM
To: Argyropoulos, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0149b93d2780437a9c2b6d8477df7991-pargyrop]
Subject: BIO's Erickson touts importance of farm bill to biobased industry

Industrial BIOtech SmartBrief

Created for **Argyropoulos.paul@epa.gov** | Web Version

May 30, 2018

Intelligence for Growing the Biobased Economy **SIGN UP · FORWARD**

RENEWABLE CHEMICALS

BIO's Erickson touts importance of farm bill to biobased industry

Members of Congress have expressed "strong, bipartisan commitment" to reauthorizing energy programs under the farm bill that support private investment in biobased manufacturing, renewable energy and energy efficiency, writes Brent Erickson, executive vice president of BIO's industrial and environmental section. He cites the successes of the Section 9003 program and notes that Congress should "continue to recognize that the farm bill needs an ongoing energy title with fair funding for its vital programs."

The Hill (5/23)

ADVANCED BIOFUELS

Expert mulls over obstacles facing ethanol compromise

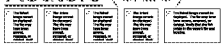
Release of the Trump administration's ethanol compromise reached between refiners and biofuel producers has been delayed due to several political and legal obstacles, including a ban on generating Renewable Identification Numbers for biofuel exports, writes Tristan Brown of Seeking Alpha. He notes that "uncertainty will remain high" until the details of the ethanol compromise and the Environmental Protection Agency's official renewable volume obligation requirements are released.

Seeking Alpha (5/24)

EPA officials, Energy, Ag departments meet on biofuel policy changes

The Environmental Protection Agency and the Energy and Agriculture departments met on Thursday to discuss President Donald Trump's planned changes to the country's biofuel laws. Trump wants to increase sales of higher-ethanol gasoline blends, count ethanol exports toward biofuel volume mandates and reduce the number of waivers that the EPA can grant small refiners.

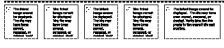
Reuters (5/23)



Velocys' Miss. biorefinery project is looking for investors

UK renewable fuels startup Velocys is seeking for strategic partners who will join its biorefinery project in Natchez, Miss., in the second half of the year. The facility will produce renewable fuels by converting woody biomass.

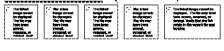
Renewables Now (Bulgaria) (tiered subscription model) (5/24)



Marathon Petroleum requests exemption from biofuels program

Marathon Petroleum, the second-biggest US refiner, has reportedly applied for a hardship waiver asking the Environmental Protection Agency to exempt one of its facilities from complying with the Renewable Fuel Standard for the 2017 calendar year.

Reuters (5/23)

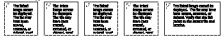


SYNTHETIC BIOLOGY AND CRISPR

Research shows viability of CRISPR to develop rice with higher yields

Researchers from Purdue University and the Chinese Academy of Sciences have produced a rice crop with a 25% to 31% high yield by employing the CRISPR-Cas9 gene-editing technology, according to a study in the journal Proceedings of the National Academy of Sciences. "An important fact concerning CRISPR technology is its immediate applicability to agricultural problems," said lead researcher Jian-Kang Zhu.

Digital Trends (5/25)



CONSUMER PRODUCTS, NUTRITION, FLAVORINGS

Collaboration to use biobased technologies for sustainable fibers

Project Effective is a collaboration of 12 companies from eight countries, including Aquafil, H&M and Genomatica, that aims to produce a more sustainable nylon for apparel and carpet textiles by using biobased technologies and renewable feedstocks. "Together we will drive new waves of healthy

industrialization, economic growth, and greater sustainability -- better than we can individually," said Aquafil Chairman and CEO Giulio Bonazzi.
Just-Style (UK) (tiered subscription model) (5/23)

Companies look to GM oilseed plants to meet omega-3 demands

Several companies, including Nuseed, BASF and Cargill, are in the process of engineering oilseed crops with omega-3 fatty acid levels that rival marine sources. Meanwhile, Nature's Crops International has introduced its Ahiflower oil, which is said to have the highest levels of non-GM omega-3 essential fatty acids for commercially available dietary plant oils.
FoodNavigator (5/24)

Because Animals offers animal-free, Earth-friendly fare

An algae-based supplement is the first product from a new Philadelphia-based pet nutrition company based on animal-free ingredients and devoted to environmental betterment. Because Animals was formed by Joshua Errett and Shannon Falconer, who are rescue pet owners, shelter volunteers and animal advocates.
Plant Based News (UK) (5/28)

BIO NEWS

Register for World Congress today for early-bird rates

BIO's World Congress in Philadelphia is the world's largest conference on industrial biotechnology. With the tri-state region of Delaware, New Jersey and Pennsylvania ranking as one of the top markets for biotechnology, you won't want to miss out on the 2018 BIO World Congress on Industrial Biotechnology. Save on your registration by taking advantage of early-bird rates, ending June 14.

Book your housing for the BIO World Congress

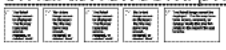
Once you've registered for BIO's World Congress, be sure to reserve a room for your stay in the City of Brotherly Love. BIO has reserved a block of hotel rooms for World Congress attendees at two area hotels near the Pennsylvania Convention Center -- Philadelphia Marriott Downtown and Le Meridian Philadelphia. BIO is pleased to be working with our exclusive housing provider, onPeak/GES, to secure the lowest rates at these Philadelphia facilities for World Congress participants. Don't miss out and book your housing today.

Learn more about BIO: BIO I & E | Conferences and Events | About BIO | Membership

EDITOR'S NOTE

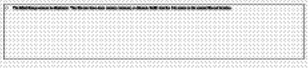
SmartBrief Privacy Policy

SmartBrief has updated its Privacy and Cookie Policy. Here are the key things for you to note: Our Privacy and Cookie Policy has been rewritten to make it easier to understand and to address new EU requirements. The policy outlines how we collect, use, share and protect your personal data. It also includes details on how you can make choices about your information and the measures we've put in place to keep your information secure. We encourage you to review our new policy at smartbrief.com/privacy.



Treat your inferiors as you would be treated by your betters.

Seneca,
philosopher



Sign Up
SmartBrief offers 200+ newsletters

Advertise
Learn more about the SmartBrief audience

Subscriber Tools:

Manage Subscriptions
Update Your Profile
Unsubscribe
Send Feedback
Archive
Search

Contact Us:

Advertising - Elizabeth Kaufman
Editor - Bryan McBournie

Mailing Address:
SmartBrief, Inc.®, 555 11th ST NW, Suite 600, Washington, DC 20004

Fuels & Fuel Additives Home

Basic Information

Fuel Programs
- Renewable & Alternative Fuels
- Gasoline
- Diesel
- State (Boutique)
- Emergency Fuel Waivers

Compliance Information
- Fuels & Additives Registration
- Fuels Reporting Registration
- Fuels Programs Reporting

General Information
- Publications & Data
- Frequent Questions
- Related Links
- Support & Help

Renewable Fuels: Notices

RFS Home | Regulations & Standards | Compliance Help | Notices | EMTS | Quality Assurance Plan | New Pathways

Note: Requirements for 2010 and later will appear in the Regulations & Standards page as a Notice of Proposed Rulemaking (NPRM) and Final Rule.

Notice of Approval of RFS2 Alternative Biomass Tracking Program

EPA has approved the Argentine Chamber of Biofuel's (CARBIO) alternative biomass tracking program. The program encompasses alternative record keeping requirements for Renewable Identification Numbers (RIN) generating feedstock that meet the same level of quality assurance as those in 40 CFR §80.1454(c)(1), (d), (g), and which are verified under an independent third party survey and audit system.

- EPA's Response to CARBIO's request for Approval of an Alternate Biomass Tracking Program (PDF) (2 pp; ??K; signed November ??, 2013)

Denial of Requests for a Waiver of the Renewable Fuel Standard

In August 2012, Governors from several States requested a waiver of the national volume requirements for the renewable fuel standard program (RFS) pursuant to Section 211(o)(7) of the Clean Air Act. EPA's extensive analysis makes clear that Congressional requirements for a waiver have not been met and that waiving the RFS would have minimal impact on ethanol demand.

- Fact Sheet: EPA Decision On Requests for a Waiver of the Renewable Fuel Standard (PDF) (2 pp, 154K, EPA-420-F-12-075, November 2012)
- Notice of Decision Regarding Requests for a Waiver of the Renewable Fuel Standard (PDF) (25 pp, 435?K, published November 27, 2012)

Related documents:

- Extension of Comment Period (PDF) (4 pp, 48K, signed September 10, 2012)
- Request for Comment (PDF) (2 pp, 196K, published August 30, 2012)
- Letter from Mike Beebe, Governor of the State of Arkansas, to Lisa Jackson, Administrator of EPA (PDF) (1 pp, 453K, August 13, 2012)
- Letter from Beverly Eaves Perdue, Governor of the State of North Carolina, to Lisa Jackson, Administrator of EPA (PDF) (2 pp, 1.01MB, August 14, 2012)

Notice of Approval of RFS2 MSW Separation Plan

EPA has approved Fiberight Blairstown LLC's municipal solid waste separation plan. The plan demonstrates the removal of recyclable materials from the municipal solid waste they intend to use as a feedstock for renewable fuel production under EPA's Renewable Fuel Standard Program.

- Decision Document: Approval of Fiberight Municipal Solid Waste Separation Plan (PDF) (7 pp, 200K, June 2012)
- EPA response to Fiberight Blairstown LLC's request for approval of a separation plant (PDF) (2 pp, 420K, July 2012)
- Notice for the opportunity to comment on the petition (PDF) (2 pp, 150K, published December 9, 2011)

Notice of Response to Petition

(published March 22, 2011)

On May 24, 2010, EPA received four petitions for reconsideration of the final rule, Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program (RFS2), (75 FR 14670, March 26, 2010). The petitioners raised several concerns associated with the final RFS2 rule. Specifically, all four petitioners requested reconsideration on the issue of EPA's adoption of the "aggregate compliance approach" as part of implementing the requirements for renewable biomass for certain feedstocks grown in the U.S. In addition, one petitioner cited the exclusion of the global "rebound" effect in the lifecycle analysis used in determining compliance with the required greenhouse thresholds for various renewable fuels. On February 17, 2011, EPA issued it's denial of these petitions because they fail to meet the criteria for reconsideration.

- Federal Register Notice (PDF) (2 pp, 140K)
- EPA response to Clean Air Taskforce, World Wildlife Fund, National Wildlife Federation, and Friends of the Earth's petitions for reconsideration of the Renewable Fuel Standards (RFS2) (PDF) (30 pp, 160 KB, February 2011)
- Letters from EPA Administrator Jackson to Clean Air Taskforce, World Wildlife Fund, National Wildlife Federation, and Friends of the Earth (PDF) (4 pp, 662 KB, February 17, 2011)

Notice of Receipt of Petition from Canada for Application of the Renewable Fuel Standard Aggregate Compliance Approach

(published March 15, 2011)

EPA is issuing notice of receipt of a petition for EPA to authorize the use of an aggregate approach for compliance with the Renewable Fuel Standard for renewable biomass. This petition was submitted by the Government of Canada. The petition requests that EPA determine that an aggregate compliance approach will provide reasonable assurance that planted crops and crop residue from Canada meet the definition of renewable biomass. In this notice, EPA is soliciting comment on all aspects of the petition.

- Notice (PDF) (3 pp, 66K)

Partial Grant and Partial Denial of Clean Air Act Waiver Application Submitted by Growth Energy to Increase the Allowable Ethanol Content of Gasoline to 15 Percent; Decision of the Administrator

(published November 4, 2010)

EPA reviewed the March 2009 application from Growth Energy, available test data and public comments on the waiver request. On October 13, 2010, EPA determined that, subject to compliance with all of the conditions listed in the waiver decision, a gasoline produced with greater than E10 and no more than E15 will not cause or contribute to a failure of certain motor vehicles to achieve compliance with the emission standards to which they have been certified over their useful lives. Therefore, EPA partially and conditionally granted the waiver request application submitted by Growth Energy for its gasoline-ethanol blend with no more than 15 vol% ethanol.

- Response to Application for Waiver (PDF) (58 pp, 4.58M, published November 4, 2010)
- More information about E15

Notice of 2009 Requirement

(published November 21, 2008)

EPA announced the Renewable Fuel Standard for 2009: 10.21 percent. This standard is used by obligated parties -- refiners, importers and blenders (other than oxygen blenders) -- to calculate their renewable volume obligation. This notice, which is required under section 211(o) of the Clean Air Act as amended by the Energy Independence and Security Act of 2007, supersedes the notice published February 14, 2008.

- Notice (PDF) (13 pp, 98K)

Notice of Extension of Public Comment for the proposed rule to implement the expanded Renewable Fuel Standard Program

(published July 7, 2009)
EPA is extending the comment period for the proposed rule "Regulation of Fuels and Fuel Additives: Changes to the Renewable Fuel Standard Program." Under the Federal Register Notice, published May 26, 2009 (50 pp, 618K) , the public comment period was set to end on July 27, 2009. The purpose of this document is to extend the comment period an additional 60 days until September 25, 2009. This extension of the comment period is provided to allow the public additional time to provide comment on the proposed rule.

- Notice (PDF) (2 pp, 77K)

Denial of the State of Texas Request for a Waiver of a Portion of the Renewable Fuel Standard

On August 7, 2008 EPA denied the Texas waiver request for a portion of the Renewable Fuel Standard (RFS). The Governor of Texas requested that EPA waive a portion of the renewable fuel standard under section 211(o)(7) of the Clean Air Act on April 25, 2008. According to the Act, EPA's Administrator s required to grant or deny the request within 90 days of receipt. On July 22, 2008, the Administrator announced that additional time was needed to adequately respond to the public comments and develop a decision document that explains the technical, economic and legal rationale of EPA's decision. Below is EPA's response and the related documents.

- Notice of Response to Request (PDF) (17 pp, 137K, August 2008)
- Press Release (August 7, 2008) announcing EPA's response to the request
- Fact Sheet: EPA Decision on Texas Request for Waiver for Portion of Renewable Fuel Standard (RFS) (3 pp, 153K, EPA-420-F-08-029, August 2008)

Related documents:

- Notice of Receipt of Request (PDF) (3 pp, 61K, May 2008)
- Press Release (July 22, 2008) announcing that EPA needed additional time to respond to the request
- Letter to EPA Administrator Johnson from Governor Perry (PDF) (3 pp, 129K, April 2008)

If you have questions or request information, please contact the appropriate support or help line found on the Support & Help page.

Please visit EPA's Transportation and Air Quality web-based repository of mobile source documents, Document Index System (DIS). This searchable repository contains regulations, Federal Register notices, policy letters, and guidance documents.

Please visit our Related Links page for other fuel related information within EPA, other U.S. Agencies, and other fuel related websites.

Message

From: Argyropoulos, Paul [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0149B93D2780437A9C2B6D8477DF7991-PARGYROP]
Sent: 10/22/2013 11:36:22 AM
To: McCabe, Janet [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d2ca413e5a534895bd6042d82e5b5f63-McCabe, Janet]; Beauvais, Joel [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=088a99c4b0f04e2aa5784349bccf7b95-Beauvais, Joel]; Grundler, Christopher [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d3be58c2cc8545d88cf74f3896d4460f-Grundler, Christopher]; Simon, Karl [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4d781d1ad595415db3a4e768c2d2b3fc-Simon, Karl]
Subject: RE: Two dox
Attachments: 2014 standards NPRM Chart.pptx; EO12866_RFS 2014 Annual Rule 2060-AR76 NPRM FRN_20130927.docx

Janet,

Here are the two documents you requested. I want to confirm that the NPRM I sent you was the final version that went over but I'm pretty sure it is.

Thanks, Paul

Paul Argyropoulos
Senior Policy Advisor
US EPA
Office of Transportation and Air Quality
Phone: 202-564-1123
Mobile: 202-577-9354
Email: argyropoulos.paul@epa.gov
Web: www.epa.gov

-----Original Message-----
From: McCabe, Janet
Sent: Tuesday, October 22, 2013 7:33 AM
To: Beauvais, Joel; Grundler, Christopher; Argyropoulos, Paul; Simon, Karl
Subject: Two dox

Can someone please send me two things as soon as you can this AM--the one pager prepared yesterday that shows the comparison of RFS numbers and the rule that went to omb on 9/30.

Thanks

PERKINSCOIE

700 13th Street, NW
Suite 600
Washington, D.C. 20005-3960

+1.202.654.6200
+1.202.654.6211
PerkinsCoie.com

February 4, 2016

LeAnn M. Johnson
LeAnnJohnson@perkinscoie.com
D. +1.202.654.6209
F. +1.202.654.9943

VIA U.S. MAIL AND ELECTRONIC MAIL

Ms. Julia MacAllister
Office of Transportation and Air Quality
Assessment and Standards Division
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
macallister.julia@epa.gov

Re: Renewable Fuel Standard – EPA-HQ-OAR-2015-0111

Dear Ms. MacAllister:

This letter asks EPA to correct a factually inaccurate statement in the Response to Comments document posted in the docket for EPA's final rule titled "Renewable Fuel Standard Program: Standards for 2014, 2015, and 2016 and Biomass-Based Diesel Volume for 2017" ("Final Rule"). In a comment submitted on the proposed rule, the Small Refinery Owners Ad Hoc Coalition ("the Coalition") explained that small refineries would bear all of the risks of EPA's efforts to drive investment in blending and distribution infrastructure through higher RIN prices. EPA responded to that comment by stating that:

> EPA has addressed the cost of the RFS program generally in its memo, "*A Preliminary Assessment of RIN Market Dynamics, RIN Prices, and Their Effects* [the "Burkholder Report"]." As that memo explains, market analysis suggests that obligated parties are generally recovering their RIN costs in the price of the petroleum fuels they produce. In other words, EPA does not believe that small refineries are inherently adversely affected by Congressional efforts to increase the amount of renewable fuel that is contained in transportation fuel sold or introduced into commerce in the United States.
>
> Response to Comments at 893 (internal citations omitted) (emphasis added).

The Burkholder Report did not reach that conclusion or even examine the issue. The Burkholder Report concluded that obligated parties recover their RIN costs in the price of the petroleum fuels they produce and that merchant refineries, therefore, are not disadvantaged by high RIN prices. Burkholder Report at 3. The Burkholder Report does not examine the impact of high RIN prices on small refineries, does not conclude that small refineries are not

disadvantaged by high RIN prices. It does not even mention "small refineries." Therefore, EPA's statement in the Response to Comments is factually incorrect and misleading.

Further, EPA cannot construe the conclusion in the Burkholder Report that merchant refineries are not disadvantaged by higher RIN prices to mean that small refineries are also not disadvantaged by higher RIN prices. For all of the reasons explained in the DOE Small Refinery Exemption Study (2011), small refiners have unique challenges and would be harmed by high RIN prices (e.g., limitations on access to capital and disproportionately higher diesel production). Merchant refineries and small refineries are distinct and cannot be considered interchangeable when assessing the impacts of high RIN prices. Merchant refineries can be large or small and small refineries can be merchant or non-merchant. Accordingly, even if a large merchant is able to recover its RIN costs in the price of the petroleum fuels it produces and is thus not disadvantaged by high RIN prices, a conclusion that the Coalition strongly disagrees with and refuted in its comments on the proposed rule[1], the Burkholder Report did not consider or conclude that small refineries recover their RIN costs in the price of petroleum fuels they produce.

To prevent any confusion among EPA staff, regulated parties, and the general public, EPA should retract its statements in the Response to Comments that EPA concluded that small refineries are not inherently adversely affected by high RIN prices.

Very truly yours,

LeAnn M. Johnson

cc: Mr. Christopher Grundler (via electronic mail)
Mr. Byron Bunker (via electronic mail)
Krista Hughes, Esq. (via electronic mail)

[1] *See* Comments on Behalf of a Coalition of Small Refinery Owners, EPA-HQ-OAR-2015-0111-2339.

Message

From: Korotney, David [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=7B00E16E09654B94BC6146550CA87936-KOROTNEY, DAVID]
Sent: 3/29/2016 1:25:07 PM
To: Machiele, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b71a67c326714ebbaa72eda552e55282-Machiele, Paul]; Sutton, Tia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=25e87403f63143acbb959446512a372c-Sutton, Tia]; Hengst, Benjamin [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c414e2bf04a246bb987d88498eefff06-Hengst, Benjamin]; Argyropoulos, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0149b93d2780437a9c2b6d8477df7991-pargyrop]; Burkholder, Dallas [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=667ef175292d4784997e454a9985b3b3-Burkholder, Dallas]; Lie, Sharyn [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=02041179e5dd4b9e9c5ea63701032c04-slie]; Camobreco, Vincent [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9e14778656044583b78723cd299602bf-VCAMOBRE]; Stahle, Susan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b25318c6014d4fb985288e15143c8596-SSTAHLE]; Orlin, David [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aa64dad518d64c5f9801eb9bb15b7ec3-DORLIN]; Dubois, Roland [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=835458b87b574ccbb1704415df8413d1-RDUBOIS]; Cohen, Janet [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d94b854e69cd4f9e80db946bf9d1c1b2-Cohen, Janet]
CC: Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]; Simon, Karl [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4d781d1ad595415db3a4e768c2d2b3fc-Simon, Karl]
Subject: RE: QFRs from Janet's 2-24-16 EPW RFS Hearing
Attachments: QFRs from 2-24-16 EPW RFS Hearing pm - DK.docx

I made a number of edits throughout.

Dallas/Paul, please take a look in particular at my thoughts on #7 and #13.

From: Machiele, Paul
Sent: Monday, March 28, 2016 4:21 PM
To: Sutton, Tia <sutton.tia@epa.gov>; Hengst, Benjamin <Hengst.Benjamin@epa.gov>; Argyropoulos, Paul <Argyropoulos.Paul@epa.gov>; Korotney, David <korotney.david@epa.gov>; Burkholder, Dallas <burkholder.dallas@epa.gov>; Lie, Sharyn <Lie.Sharyn@epa.gov>; Camobreco, Vincent <Camobreco.Vincent@epa.gov>; Stahle, Susan <Stahle.Susan@epa.gov>; Orlin, David <Orlin.David@epa.gov>; Dubois, Roland <Dubois.Roland@epa.gov>; Cohen, Janet <cohen.janet@epa.gov>
Cc: Bunker, Byron <bunker.byron@epa.gov>; Simon, Karl <Simon.Karl@epa.gov>
Subject: RE: QFRs from Janet's 2-24-16 EPW RFS Hearing

Some edits and additions from me. Thanks for taking the first whack at it Tia.

PaulM

From: Sutton, Tia
Sent: Friday, March 25, 2016 2:59 PM
To: Hengst, Benjamin <Hengst.Benjamin@epa.gov>; Argyropoulos, Paul <Argyropoulos.Paul@epa.gov>; Machiele, Paul <machiele.paul@epa.gov>; Korotney, David <korotney.david@epa.gov>; Burkholder, Dallas <burkholder.dallas@epa.gov>; Lie, Sharyn <Lie.Sharyn@epa.gov>; Camobreco, Vincent <Camobreco.Vincent@epa.gov>; Stahle, Susan <Stahle.Susan@epa.gov>; Orlin, David <Orlin.David@epa.gov>; Dubois, Roland <Dubois.Roland@epa.gov>; Cohen, Janet <cohen.janet@epa.gov>
Cc: Bunker, Byron <bunker.byron@epa.gov>; Simon, Karl <Simon.Karl@epa.gov>
Subject: QFRs from Janet's 2-24-16 EPW RFS Hearing

All,
We have received the QFRs from Janet's EPW hearing on RFS. I have taken a stab at draft responses (mostly from materials we've already prepared – so that we can use already-blessed language to cut down the review time). Please take a look and edit as you see fit – I've also put comment bubbles in to a few of you to edit/draft responses in some places.

We've been asked to complete our drafting by **April 6th**.

Thanks!
-Tia

Biotechnology Innovation Organization

The Myth of High RIN Prices As Proof of the Blend Wall

- **Data recently released by EPA challenges conventional wisdom that the blend wall caused RIN prices to rise in 2013.**
- **Refiners and importers blended ethanol into obligated gasoline volumes beyond the 10 percent limit as early as 2010.**
- **Refiners' and importers' use of compliance flexibility reveals they did not experience RIN shortages at any point.**
- **EPA's rulemaking delays and unwarranted changes to the RFS based on blend wall assumptions harmed biofuel producers while providing obligated parties relief from a problem that didn't exist.**
- **EPA should reconsider its 2017 RFS proposed rule in light of this newly available data.**

In 2007, Congress updated the Renewable Fuel Standard (RFS) and set a statutory schedule for annual increases in production and use of biofuels to reach 36 billion gallons in 2022. Under the RFS, petroleum refiners and importers are assigned an annual Renewable Volume Obligation (RVO), indicating the percentage of refined or imported fuel that must be renewable in order to meet the congressionally set schedule for production and use of biofuels. Entities incurring an RVO are referred to as obligated parties. Renewable Identification Numbers (RINs) are credits generated under the RFS program that obligated parties use to demonstrate compliance with their annual RVOs.

The blend wall is a theoretical 10 percent limit on the amount of ethanol that can be blended into gasoline in the United States, due to infrastructure and market constraints. The 36 billion gallon volume set by Congress was projected to be 20 percent of transportation fuel use by 2022, indicating that the blend wall would have to be passed at some point. It has become widely accepted that U.S. fuel

refiners and importers reached the 10 percent blend wall in 2013 and that this event was signaled by a dramatic spike in spot market prices for RINs.[1,2]

A seminal 2012 paper from researchers at the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri advanced the theory that a sharp increase in RIN prices would signal when the RFS forced fuel refiners over the blend wall.[3] The authors sought to understand why RIN prices did not rise during 2012, given estimated constraints on biofuel supplies in comparison to RFS requirements. The researchers tested a hypothesis that obligated parties could accumulate sufficient RINs in the early years of the updated RFS to delay arrival of the blend wall (though not prevent it), possibly until 2015. The paper presented a straightforward accounting model comparing the congressionally established fuel volumes to the number of available RINs, estimating an existing bank of 3 billion RINs at the start of 2012.

Data recently released by the U.S. Environmental Protection Agency (EPA) in response to a Freedom of Information Act (FOIA) request enables a true accounting of how obligated parties met annual RVOs from 2010 through 2013, using current year generated RINs, banked carryover RINs, and other compliance options.[4,5] A true accounting – comparable to the FAPRI model – directly challenges the conventional wisdom that difficulty in meeting the RFS obligations due to the blend wall caused RIN prices to rise in 2013. RFS obligated parties' reported fuel use and

---

[1] Stock, J.H. (2015) "The Renewable Fuel Standard: A Path Forward." New York: Columbia University School of International and Public Affairs and Center on Global Energy Policy.
[2] Knittel, C.R. et al. (2015) "The Pass-Through of RIN Prices to Wholesale and Retail Fuels under the Renewable Fuel Standard." Cambridge, MA: Center for Energy and Environmental Policy Research, Massachusetts Institute of Technology.
[3] Thompson, W. et al. (2012) "A Question Worth Billions: Why Isn't the Conventional RIN Price Higher?" Columbia, MO: Food and Agricultural Policy Research Institute. FAPRI-MU Report #12-12.
[4] EPA. (2016) "Annual Compliance Data for Obligated Parties and Renewable Fuel Exporters under the Renewable Fuel Standard (RFS) Program." https://www.epa.gov/fuels-registration-reporting-and-compliance-help/annual-compliance-data-obligated-parties-and.
[5] Letter from Byron J. Bunker, Director, Compliance Division, Office of Transportation and Air Quality, USEPA to Paul Winters, BIO. "RE: Freedom of Information Act request EPA-HQ-2015-004861." Aug. 8, 2016. https://foiaonline.regulations.gov/foia/action/public/view/request?objectId=090004d2805fef3f.

use of ethanol RINs indicates that the blend wall was reached as early as 2010 and was definitely breached by 2012. Nonetheless, during those years conventional RIN prices remained low and obligated parties continued to accumulate excess RINs to carry over for future compliance years.

The 2013 price spikes in spot market RIN trading cannot be explained as a consequence of the blend wall, since they are not connected to a demonstrable increase in difficulty for obligated parties to meet annual RFS obligations. The finding has implications for current policy in EPA's administration of the RFS. Further research into the causes of RIN price spikes will require data on the volumes of RINs traded and actual prices paid during transfers of RINs.

Compliance Options

Obligated parties are assigned four distinct but nested RVOs each year – for cellulosic biofuel, biomass-based diesel (BBD), advanced biofuel and conventional biofuel – and they must retire sufficient eligible and valid RINs to satisfy each. RVOs are nested; e.g., RINs retired to meet the cellulosic or the BBD RVO also concurrently satisfy the advanced and overall RVO. EPA established different RIN codes to distinguish the various categories of biofuels eligible to meet the nested RVOs. With the exception of D4 RINs, though, the RIN codes do not distinguish the type of biofuel, such as ethanol or biomass-based diesel; EPA publishes separate data on RINs generated by type of fuel produced.

In establishing regulations for the RFS program, EPA provided obligated parties flexibility in complying with annual RVOs. EPA established the RIN system under the RFS to provide credits, as directed by Congress, for refiners and importers who use more renewable fuel than required. Like other compliance systems under the Clean Air Act fuel regulations, RFS RINs also equalize the compliance burden among obligated parties. Equalization of the compliance burden enables obligated parties who exceed their individual requirement to transfer (or sell) credits to those who fall short of the obligation.

Per the statute, RINs are valid to meet annual RVOs for one year from the date they are generated. EPA's regulations enable individual obligated parties to meet up to 20 percent of an annual RVO using RINs generated in the preceding year. Such RINs are referred to as "carryover RINs." RINs that are not used to satisfy an RVO in the year they are generated or the subsequent year expire unused.

EPA regulations, as directed by Congress, also allow individual obligated parties to carry forward a deficit in an annual RVO, essentially deferring all or part of that RVO to the following year. This is referred to as the "deficit carryforward" provision. The statute and regulations specify, though, that the individual obligated party must satisfy the full deficit in the subsequent year along with the annual RVO. An individual obligated party may not have a deficit carryforward in the same RVO two years in a row.

The FAPRI paper was published in December 2012, prior to the compliance deadline for the 2012 RFS RVOs (which occurred February 28, 2013). Consequently, the authors make use of data provided by EPA on the number of RINs generated in prior years – excluding the 2010 compliance year – to estimate the availability of 2011 RINs to be used for the current year and carried over for 2012. Lacking data on the use of carryforward deficits or RINs expired unused, the authors do not include these data points in the calculation. The authors also use the volumes specified by Congress for the RFS as proxies for the annual RVOs; they then estimate the obligation to use ethanol by calculating the "conventional gap" and the "advanced gap" – the difference between the RFS statutory volumes for these categories and the BBD category. Lastly, the authors use fuel use data from the Energy Information Administration (EIA) to estimate whether the annual RVOs approach the blend wall.

Actual data from the program now provides a clearer picture of the relative difficulty or ease for obligated parties to meet annual RVOs between 2010 and 2013. The data includes numbers of RINs used for compliance, carried over, and expired unused as well as actual RVOs (which differ from the statutory volumes). Data on the use of carryforward deficits – which decrease the current year and increase the subsequent year RVOs – can be included in a true accounting.

The Devil's in the Data

The volumes of U.S. fuel subject to the RFS (as reported by obligated parties) are substantially smaller than fuel use reported by EIA. Small refiners and small refineries (even those owned by large refiners) were exempted from the RFS program through 2012. In setting the 2010 RVOs, EPA reduced EIA's estimate of U.S. fuel production by 13.5 percent, while providing small refineries (processing less than 75,000 barrels of crude per day) and small refiners (employing 1,500 or fewer people) exemption from the obligations.[6,7] In 2011, EPA ended the exemption for small refiners, but granted hardship exemptions to three small refineries that petitioned the agency.[8] Then in 2012, in response to a Department of Energy study ordered by Congress, EPA reinstated the exemption for 21 small U.S. refineries and retroactively applied it to the 2011 RVOs, prior to compliance deadlines. EPA adjusted the EIA estimates of fuel use for those years by approximately 3.6 percent of the gasoline pool and 4.5 percent of the diesel pool, estimating the reduction to be approximately 4.87 billion gallons of gasoline and 2.28 billion gallons of diesel in 2012.[9] EPA granted a single exemption to a small refinery in 2013.[10]

The actual fuel volumes reported by obligated parties are shown below in Table 1. Both gasoline and diesel are obligated fuels under the RFS, but ethanol is not blended into diesel fuel. The volume of obligated gasoline use is approximately 70 percent of the reported volumes each year. EIA reports minor variations in the balance of gasoline and diesel volume used each year from 2010 to 2013, so these relative annual percentages are applied to the reported obligated volumes to estimate obligated gasoline volume. The blend wall is estimated as 10 percent of annual obligated gasoline volumes.

---

[6] Fed. Reg. 72 (23911), Tuesday, May 1, 2007.
[7] 75 Fed. Reg. (14735-14737), Friday, March 26, 2010.
[8] 75 Fed. Reg. (76805), Thursday, December 9, 2010.
[9] 77 Fed. Reg. (1223, 1340), Monday, January 9, 2012. Cf. "Small Refinery Exemption Study: An Investigation into Disproportionate Economic Hardship," U.S. Department of Energy, March 2011.
[10] 78 Fed. Reg. (49825), Thursday, August 15, 2013.

Table 1: Blend Wall for RFS Renewable Volume Obligations, 2010-2013

	2010	2011	2012	2013
Obligated fuel volume	153,191,431,635	169,401,578,093	166,585,474,309	172,975,631,165
Gasoline percentage of obligated fuel	0.71	0.69	0.7	0.7
Estimated obligated gasoline volume	108,168,815,169	117,707,460,175	116,507,319,837	121,546,237,671
Estimated blend wall	10,816,881,517	11,770,746,017	11,650,731,984	12,154,623,767

Annual RVOs are calculated as both a percentage of the current year's obligated volumes plus any deficit carryforward from prior years. Obligated parties used the deficit carryforward provision most heavily in 2010. They carried forward approximately 13.5 percent of the 2010 BBD RVO and 24.6 percent of the advanced RVO as a deficit and added these volumes to the 2011 RVO. By comparison, they carried forward less than 1.3 percent of the 2010 overall RVO as a deficit. Obligated parties have used the deficit carryforward provision less and less each year since, indicating relative ease in meeting the annual RVOs. In 2011, they carried forward only about 3.4 percent of the BBD RVO and added that volume to the 2012 RVO. They carried forward less than 2.7 percent of the advanced RVO and less than 0.5 percent of the overall RVO. Since 2011, obligated parties have carried forward less than 1 percent of each annual RVO as a deficit.

The total annual RVOs are shown below in Table 2. The final RVOs below are calculated by subtracting the deficit from the current year and adding it to the following year. Note that the statute adopted by Congress included 2009 obligations for biomass-based diesel and advanced volumes; however, EPA did not finalize regulations until 2010. EPA therefore set a BBD RVO in 2010 that included the 2009 obligation. Cellulosic RVOs for 2011 and 2012 were vacated, so the cellulosic RVO for 2011 remains zero, despite the deficit carryforward.

The FAPRI paper calculates the obligation to use ethanol as the "gap" between the overall RVO and the BBD RVO. Absent the data recently released by EPA, this was a

reasonable approximation. Nearly all D6 RINs and a large majority of D5 RINs represent ethanol production, which must be incorporated in the gasoline supply. A more accurate approximation can be obtained by looking at EPA data on the annual generation of RINs by type of biofuel produced.[11] This data shows that not all D6 RINs represent ethanol; in 2013, nearly 2 percent of D6 RINs were assigned to biomass-based diesel or other fuels. And not all D5 RINs represent ethanol; in 2010, nearly 86 percent of D5 RINs generated were for biomass-based diesel.

Table 2: Calculation of Annual RVOs Considering Deficit Carryforwards

	2010	2011	2012	2013
Annual overall RVO	12,638,293,110	13,569,066,405	15,375,839,279	16,848,743,020
Annual advanced RVO	934,467,733	1,321,332,309	2,015,684,239	2,802,157,305
Annual BBD RVO	1,685,124,090	1,168,882,005	1,515,927,816	1,954,598,102
Annual cellulosic RVO	6,182,591			864,865
Overall deficit carryforward	163,353,609	66,194,174	72,956,555	57,634,008
Advanced deficit carryforward	229,693,190	35,104,504	18,582,711	17,290,622
BBD deficit carryforward	227,120,812	39,731,828	13,336,991	6,617,884
Cellulosic deficit carryforward	31,453			26
Final overall RVO	12,474,939,501	13,666,225,840	15,369,076,898	16,864,065,567
Final advanced RVO	704,774,543	1,515,920,995	2,032,206,032	2,803,449,394
Final BBD RVO	1,458,003,278	1,356,270,989	1,542,322,653	1,961,317,209
Final cellulosic RVO	6,151,138			864,839
Percent ethanol in advanced RVO	14.1	85.3	96.7	86.7
"Ethanol gap"	11,106,281,004	12,041,123,331	13,757,942,313	14,212,739,835
Percent of obligated gasoline	10.3	10.2	11.8	11.7

[11] U.S. EPA. (2016) Renewable Identification Number (RIN) Data for Renewable Fuel Standard Program. https://www.epa.gov/renewable-fuel-standard-program/renewable-identification-number-rin-data-renewable-fuel-standard.

The amount of the annual RVOs that had to be met with ethanol – the "ethanol gap" – is estimated in Table 2 above by subtracting the BBD RVO plus the portion of the advanced RVO met by available biomass-based diesel from the overall RVO.

The amount of ethanol that obligated parties were therefore required to blend into the gasoline they produced was already at 10 percent (or slightly above) as of 2010. Comparing the "ethanol gap" in Table 2 above to the estimated blend wall in Table 1 above illustrates the fact that annual RVOs were above the blend wall by 2010. By 2012, the requirement was at 11.8 percent. Further, the "ethanol gap" was no more difficult for obligated parties to meet in 2013 than in 2012 – the relative percentages are nearly identical. The data undermine the theory that the blend wall was the cause of RIN price spikes in 2013.

Did Obligated Parties "Delay" the Blend Wall?

The FAPRI researchers test the hypothesis that obligated parties could use carryover RINs to limit blending of ethanol in any current year and thereby delay the arrival of the blend wall. Under this hypothesis, obligated parties would use as many carryover RINs as possible to meet each annual RVO, up to the allowable 20 percent.

The data recently released by EPA demonstrate that obligated refiners and importers did not use the maximum allowable number of carryover RINs in any year for any RVO, with the singular exception of the overall RVO in 2012. In fact, the number of RINs obligated parties allowed to expire unused in 2010 and 2011 is considerable in comparison to the numbers carried over. Moreover, use of carryover RINs declined as a percentage of the annual RVOs from 2012 to 2013.

Table 3 below presents the numbers of 2010, 2011, and 2012 RINs carried over and retired to meet the 2011, 2012 and 2013 RVOs. The percentage of the annual RVOs that obligated refiners and importers met with carryover RINs and the numbers of prior year RINs that expired unused, after the annual RVO was met, are also presented.

Because the reported 2010 BBD RVO also included 2009 volumes, obligated parties had a limited number of 2010 D4 and D5 RINs available to carry over for the 2011 BBD and advanced RVOs. Obligated parties met less than 5 percent of the 2011 BBD and advanced RVOs with carryover 2010 RINs. Comparatively, they met 17 percent of the overall 2011 RVO with carryover 2010 RINs. Obligated refiners and importers apparently met a small portion of the 2011 RVOs with 2010 RFS1 RINs that are not reported by EPA.

In 2012, obligated parties met 18 percent of the BBD RVO and 16.1 percent of the advanced RVO with carryover RINs. In 2013, obligated parties met less than 15 percent of their annual RVOs with carryover RINs.

Nearly a half billion available 2010 vintage RINs expired unused, even as the deficit carryforward provision was used. And nearly half a billion 2011 vintage RINs also expired unused. Most of the expired unused RINs were D6 RINs from ethanol – more than 6 percent of D6 RINs generated in 2010 and nearly 3.5 percent of D6 RINs generated in 2011 expired unused.

Table 3: Carryover RINs Retired by Obligated Refiners and Importers, 2011-2013

	2011	2012	2013
D6 RINs carried over	2,241,455,041	3,169,954,134	2,087,485,067
D5 RINs carried over	3,580,101	50,801,949	165,030,837
D4 RINs carried over	57,368,904	277,937,240	248,305,050
Percent of overall RVO met with carryover RINs.	16.9	22.8	14.8
Percent of advanced RVO met with carryover RINs	4	16.2	14.7
Percent of BBD RVO met with carryover RINs	4.2	18	12.7
Prior year D6 RINs expired unused	426,649,448	469,306,771	11,935,021
Prior year D5 RINs expired unused	56,433	2,688,287	1,407,742
Prior year D4 RINs expired unused	2,755,307	23,115,151	2,514,278

Biotechnology Innovation Organization

Obligated parties did not use carryover RINs to the maximum possible, except in one instance. Interestingly, the data reveals that obligated parties met 22.8 percent of the 2012 overall RVO with rollover RINs, as shown in Table 3 above. While there is a 20 percent cap on use of rollover RINs, the cap applies to individual obligated parties. The data here represents an aggregate use of RINs. There is no indication from EPA that any individual refiner violated the cap.

The aggregate use of carryover RINs beyond the 20 percent cap is clearly indicated in the data posted by EPA for obligated refiners, recreated in Table 4 below. Obligated refiners used more than 3.378 billion 2011 vintage RINs out of a total 15.139 billion RINs retired to meet their overall 2012 RVO, equal to 22.3 percent. The final column in the table presents a sum of all carryover RINs retired by obligated refiners to meet the annual RVO above a sum of all RINs (both current year and carryover) retired.

Table 4: RINs Used for Compliance by Obligated Refiners, Including Carryover RINs, 2010-2013

	RIN Year	D4 RINs	D5 RINs	D6 RINs	Total Carryover and RINs retired to meet overall RVO
2010 Compliance Year[1]		N/A	N/A	N/A	
	2010	166,232,179	23,720,991	3,441,123,591	3,631,076,761
2011 Compliance Year[1]	**2010**	49,966,029	2,669,842	1,920,351,778	1,972,987,649
	2011	1,027,143,577	152,386,595	7,769,788,969	10,922,306,790
2012 Compliance Year	**2011**	268,961,057	49,103,786	3,060,020,326	3,378,085,169
	2012	1,254,882,608	415,495,440	10,090,718,261	15,139,181,478
2013 Compliance Year	**2012**	244,478,487	156,284,147	2,040,007,535	2,440,770,169
	2013	1,939,160,352	485,169,551	11,476,873,108	16,341,973,180

Did Obligated Parties Have Difficulty With the Blend Wall?

The FAPRI authors theorize that RIN prices would rise in response to market shortages of RINs, once refiners and importers are unable to blend ethanol into

obligated gasoline volumes beyond the 10 percent limit. EPA's newly released data reveals that the amount of ethanol blended into the U.S. transportation fuel supply exceeded 10 percent by 2011.

RINs separated in any given year (whether retired, expired or carried over to the following year) represent biofuel blended into transportation fuel. Table 5 below presents a calculation of all D6 and D5 RINs separated from ethanol each year that were eventually retired, carried over, or expired unused. The ratio of RINs generated and assigned to ethanol gallons is applied to those retired, carried over and expired unused. It could be the case that all D5 and D6 RINs that expired unused were separated from ethanol (and conversely, those RINs retired were from biomass-based diesel). That would directly counter the theory that obligated parties were "banking" ethanol RINs to forestall the blend wall. Regardless, the RINs that expired unused still represent ethanol blended into the transportation fuel supply. Further, eliminating expired unused RINs from the calculation would lower the rate of ethanol blended by only a few tenths of a percent.

	2010	2011	2012	2013
D6 RINs retired	3,838,694,623	9,184,154,593	10,555,225,166	11,923,667,579
D6 RINs carried over	2,241,455,041	3,169,954,134	2,087,485,067	
D6 RINs expired unused	426,649,448	469,306,771	11,935,021	
D5 RINs retired	24,808,442	170,668,757	430,685,359	507,813,089
D5 RINs carried over	3,580,101	50,801,949	165,030,837	
D5 RINs expired unused	56,433	2,688,287	1,407,742	
Percent ethanol in D5 RINs	14.1	85.3	96.7	86.7
Total ethanol RINs used	6,492,838,486	13,008,731,909	13,230,849,241	12,139,401,347
Percent ethanol in obligated gasoline volumes	6	11	11.4	10

Bio Biotechnology Innovation Organization

The number of ethanol RINs retired, carried over or expired unused in 2010 and 2013 appear to be below the blend wall because the data is incomplete. EPA does not provide RIN data from the RFS1 program, which was in effect through June 2010. But only gasoline volumes were obligated under RFS1; it is likely that the RINs carried over from RFS1 to meet 2010 RVOs primarily represented ethanol. And therefore the proportion of ethanol used to satisfy fuel obligations likely exceeded 10 percent as early as 2010.

For 2013 EPA has yet to provide the numbers of RINs carried over to 2014 or expired unused. However, EPA has reported (as of September 2016) that more than 13.2 billion 2013 D6 RINs have been retired – exceeding the 11.9 billion reported in June. Including the 1.3 billion D6 RINs retired between June and September would increase ethanol use to 11 percent of the obligated volumes. Similarly, 551 million D5 RINs have been retired as of September, exceeding the 508 million reported in June. The additional 43 million RINs likely included 37 million from ethanol.

Obligated volumes of fuel increased in 2013 as the small refiner exemption expired. The additional volumes provided obligated parties a larger pool of gasoline in which to blend ethanol, compared to 2011 and 2012, potentially easing any difficulty with the blend wall. The rise in RIN prices in 2013 therefore cannot be explained by the blend wall, since it was demonstrably easier for obligated parties to blend ethanol in 2013 than in 2011 or 2012, when RIN prices remained low.

Caveats

As made clear in the newly provided data from EPA, fuel exporters incur a separate RVO if they export RIN-bearing biofuels. The current year and carryover RINs retired by exporters are excluded from the current analysis. The deficit carryforward numbers reported by EPA include deficits for export RVOs. However, the overall ratio of RIN deficits to the annual RVOs is so small after 2011 that it has no appreciable impact on final RVOs.

It is possible that some of the ethanol used during 2010, 2011 and 2012 was blended into gasoline produced by small refiners and small refineries exempted from RFS2 obligations. Splash blending ethanol into the unobligated volumes of gasoline therefore could have provided obligated refiners and importers potential relief from the blend wall. However, exempt small refiners and small refineries could not separate RINs from renewable fuels during 2011 and 2012; to do so, they would have had to register for the program and become obligated parties. Though the exemption originally expired in 2011, many small refiners did not register for the program as they sought congressional aid in extending their exemption.

Further, obligated parties could not take possession of the additional gasoline without increasing their own obligation. They would have had to purchase the separated RINs from other parties, if they faced a shortage in their obligations. This path of relief from the blend wall would therefore have presented a potential difficulty for obligated parties in meeting obligations; and under the theory, a shortage of RINs should have raised prices.

Implications for Policy

Newly released data refutes the theory that price spikes in spot trading of RINs in 2013 signaled arrival of the blend wall. Aside from the post hoc nature of such an argument, the evidence indicates that the blend wall arrived as early as 2010 and was definitively surpassed by 2012, even potentially easing slightly in 2013. The blend wall cannot serve as an explanation of the 2013 RIN price spikes, since its arrival should have caused RIN price spikes well before then.

Recently, a group of merchant refiners petitioned EPA to once again exempt them from the RFS program.[12] The petition rests on the demonstrably incorrect assumption that the 2013 RIN price spike was caused by arrival of the blend wall.

---

[12] *Oversight of the Renewable Fuel Standard, Hearing before the Sen. Comm. On Env't and Public Works*, 114th Cong. 10 (Feb. 24, 2016). Written Testimony of Ronald E. Minsk. http://www.epw.senate.gov/public/_cache/files/a4545f2f-52df-4f3f-8a08-e5802950d8e5/rem-rfs-written-testimony.pdf. Also, Minsk, R.E., Letter to Janet McCabe, Acting Assistant Administrator for Air and Radiation, EPA, July 24, 2015.

The original expiration of the small refiner exemption in 2011 appeared to have no effect on RIN prices or availability; therefore, reinstatement of an exemption is unlikely to have an impact in the future. In fact it could shrink the obligated volume of gasoline still further, increasing difficulty for the remaining obligated parties to meet RVOs.

EPA delayed issuing the 2013 RVOs until August of that year as it considered the assumed arrival of the blend wall and the potential difficulty for refiners to meet annual RVOs that year. The agency eventually stuck with the statutory volume; nevertheless, it delayed the compliance deadline for the 2013 RVOs and subsequently extended the delay until March 2016.[13] The relative ease or difficulty for obligated parties to meet RVOs in 2012 and 2013 was thereby obscured until this year.

EPA also delayed issuing the 2014 and 2015 RVOs as it addressed controversy "about how the volumes should be set in light of lower gasoline consumption than had been forecast" in 2007 when Congress initially set the statutory volumes of biofuel – referring to the blend wall.[14] The agency eventually established RVOs for 2014, 2015 and 2016 in a single rule made public in November 2015, while at the same time denying petitions from refiners for a waiver of the 2014 RVOs. The refiners' petition argued that a shortage of available RINs – due to their inability to blend ethanol above 10 percent of gasoline volumes – would severely harm the economy through an increase in fuel prices.[15] Despite rejecting the petition, EPA waived significant volumes from the congressionally set schedule of biofuel production and use for 2014, 2015 and 2016. It further refused to set higher RVOs in those years, arguing that doing so would force obligated parties to draw down the "bank" of carryover RINs.

EPA's delays in setting the 2013, 2014, and 2015 RVOs combined with the unwarranted changes to the RFS program finalized for 2014-2016 caused direct

---

[13] 79 Fed. Reg. (34242). Monday June 16, 2014; 79 Fed. Reg. (46353). Friday, Aug. 8, 2014.
[14] 79 Fed. Reg. (73007). Tuesday, Dec. 9, 2014.
[15] 80 Fed. Reg. (77428-29). Monday, Dec. 14, 2015.

harm to biofuel producers and increased greenhouse gas emissions from the transportation sector. BIO estimates that EPA's new methodology for setting annual RVOs has caused a $22.4 billion shortfall in necessary investment in advanced biofuels. Investment patterns clearly demonstrate that EPA is sending a sustained market signal that disincentivizes advanced biofuels.[16] Further, EPA's rule changes cut short the effectiveness of the RFS program for greenhouse gas emission reduction by limiting market space for renewable fuels and guaranteeing more market space for petroleum fuels. BIO estimates that transportation-related greenhouse gas emissions (measured in CO2e) increased by 72 million metric tons in 2014 and again by 22.9 million metric tons in 2015, from year to year. Further, based on EIA projections, BIO estimates that greenhouse gas emissions will increase in 2016 by 6.9 million metric tons, compared to 2015. And in 2017, emissions will increase by 16.8 million metric tons, if EPA finalizes the volumes it proposes.[17]

The 2013 price spikes in spot market RIN trading remain unexplained. Further research into the true causes of RIN price spikes is hampered by lack of data on the volumes of RINs traded and actual prices paid for RIN transfers in 2013.

EPA has again proposed to provide unwarranted relief from the blend wall to obligated parties in the 2017 RVOs.[18] EPA should reconsider this course of action in light of data disproving the relationship between high RIN prices and the blend wall.

---

[16] Biotechnology Innovation Organization. (2016) "Estimating Another Year of Chilled Investment in Advanced Biofuels Due to RFS Uncertainty." Washington, DC. https://www.bio.org/sites/default/files/Estimating_Another_Year_of_Chilled_Investment.pdf
[17] Biotechnology Innovation Organization. (2016). "BIO Comments on Renewable Fuel Standards for 2017." https://www.bio.org/letters-testimony-comments/bio-comments-renewable-fuel-standards-2017.
[18] 81 Fed. Reg. (34778). Tuesday, May 31, 2016.

Appendix: Calculation of Ethanol RINs from RINs Generated

EPA reports annual RIN generation and biofuel production by fuel type in its public data for the Renewable Fuel Standard. The ratio of RINs generated for ethanol to those generated for biomass-based diesel during the 2010- 2013 time period is presented below in Appendix Table 1. Other types of fuel that generate RINs available to satisfy the RFS – such as naptha, compressed and liquefied natural gas, or heating oil – are not counted since they are not blended into the obligated volumes of gasoline and diesel.

	2010	2011	2012	2013
D6 biomass-based diesel RINs	18,779,478	6,258,577	1,118,519	251,525,451
D6 ethanol RINs	6,777,308,371	13,609,057,120	12,986,723,082	13,098,970,936
Ratio of ethanol	99.7	100	100	98.1
D5 biomass-based diesel RINs	24,568,615	33,385,319	20,728,997	70,172,481
D5 ethanol RINs	4,043,017	193,748,805	603,461,683	458,250,657
Ratio of ethanol	14.1	85.3	96.7	86.7

Bio Biotechnology Innovation Organization

United States Government Accountability Office

Report to Congressional Requesters

March 2014

PETROLEUM REFINING

Industry's Outlook Depends on Market Changes and Key Environmental Regulations

GAO-14-249

GAO Highlights

Highlights of GAO-14-249, a report to congressional requesters

March 2014

PETROLEUM REFINING

Industry's Outlook Depends on Market Changes and Key Environmental Regulations

Why GAO Did This Study

The U.S. petroleum refining industry—the largest refining industry in the world—experienced a period of high product prices and industry profits from the early 2000s through about 2007. Since the recession of 2007 to 2009, the industry has been in transition.

Federal and state agencies regulate petroleum refining and the use of petroleum products to protect human health and the environment, as well as for other purposes. EPA, DOT, and California recently proposed or strengthened five key regulations, including EPA and DOT's coordinated fuel economy and GHG vehicle emission standards, and EPA's RFS, which has required that refiners and others ensure transportation fuels include increasing amounts of renewable fuels such as ethanol produced from corn.

GAO was asked to provide information on the domestic petroleum refining industry. This report examines: (1) major changes that have recently affected the industry and (2) the future of the industry. GAO reviewed information including studies by agencies and consultants and company financial filings; interviewed stakeholders, including agency officials and representatives of refiners and environmental organizations; and reviewed forecasts by the Energy Information Administration and others.

What GAO Recommends

GAO recommends that EPA identify the underlying causes of delays in issuing RFS standards and implement a plan to issue RFS standards on time. EPA generally agreed with GAO's findings and recommendations.

View GAO-14-249. For more information, contact Frank Rusco at (202) 512-3841 or ruscof@gao.gov.

What GAO Found

Stakeholders GAO contacted and information reviewed by GAO identified the following three major changes that have recently affected the domestic petroleum refining industry:

- *Increased production.* U.S. and Canadian crude oil production have increased, leading to lower costs of crude oil for some refiners. After generally declining for decades, monthly U.S. crude oil production increased over 55 percent compared with average production in 2008.
- *Declining consumption.* Domestic consumption of petroleum products declined by 11 percent from 2005 through 2012, resulting in a smaller domestic market for refiners.
- *Key regulations.* Two key regulations—the Environmental Protection Agency's (EPA) and Department of Transportation's (DOT) coordinated fuel economy and greenhouse gas (GHG) vehicle emission standards, as well as EPA's Renewable Fuel Standard (RFS)—have contributed to declining petroleum-based fuel consumption. For some refiners, compliance with the RFS increased costs in the first half of 2013, though costs have since declined to some degree from their peak. According to some stakeholders GAO contacted, this was primarily due to RFS requirements exceeding the capability of the transportation fuel infrastructure to distribute and the fleet of vehicles to use renewable fuels. Moreover, EPA has missed the statutory deadline to issue regulations establishing annual RFS blending standards since 2009. EPA has not systematically identified the underlying causes of these delays or changed its approach in order to avoid them. A late RFS contributes to industry uncertainty, which can increase costs because industry cannot plan and budget effectively, according to some stakeholders.

Stakeholders GAO contacted and information reviewed generally suggested that the U.S. refining industry's outlook depends on the following factors:

- *Domestic consumption.* Future consumption of petroleum products is uncertain, with projections ranging from stable to slightly increasing through 2020 but not returning to consumption levels of the past. Forecasts GAO reviewed suggest higher future refinery production in scenarios with higher domestic consumption.
- *Costs of key regulations.* The extent to which requirements in the key regulations increase costs for refiners will affect the industry's outlook. For example, future costs to comply with RFS may depend on the annual renewable fuel volumes EPA sets and whether EPA issues annual RFS standards on time. In general, increasing costs may be absorbed by refiners (i.e., by reducing their profits), be passed on to consumers through higher prices, or both.
- *Foreign markets.* The U.S. refining industry has increasingly relied on foreign markets. Exports grew from 7 percent of production in 2007 to 17 percent in 2012. The extent to which domestic refiners export their products will depend on the competitiveness of U.S. refiners. Factors that may affect competitiveness include domestic environmental regulations, levels of U.S. and Canadian crude oil production, and the balance between global refining capacity and demand for petroleum products.

United States Government Accountability Office

Contents

Abbreviations

CAFE	Corporate Average Fuel Economy
CARB	California Air Resources Board
CI	carbon intensity
DOE	Department of Energy
DOT	Department of Transportation
EIA	Energy Information Administration
EPA	Environmental Protection Agency
GHG	greenhouse gas
IEA	International Energy Agency
LCFS	Low Carbon Fuel Standard
NHTSA	National Highway Traffic Safety Administration
OMB	Office of Management and Budget
ppm	parts per million
PSD	Prevention of Significant Deterioration
RFS	Renewable Fuel Standard
RIN	renewable identification number

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
441 G St. N.W.
Washington, DC 20548

March 14, 2014

The Honorable David Vitter
Ranking Member
Committee on Environment and Public Works
United States Senate

The Honorable James Inhofe
United States Senate

The petroleum refining industry in the United States—the largest refining industry in the world—experienced what some observers and industry analysts have called a "golden age" from the early 2000s through about 2007. As we reported in 2007, this period was characterized by increased petroleum product prices, as well as higher price volatility and industry profits.[1] Conditions changed with the recession of 2007 to 2009—the most severe in this country since the 1930s—and the industry has since been in transition. Amid declining refining profits, seven refineries have closed since 2008, and the remaining refineries have not been run as intensively. Conditions have improved more recently, with an Energy Information Administration (EIA) official noting that the industry may be in a second golden age.[2] Petroleum refineries process crude oil into transportation fuels and other products (e.g., gasoline, diesel, and kerosene) that together comprise the largest source of energy in the United States—36 percent of the energy consumed in 2012, according to data from EIA. Domestic petroleum refineries produce the majority of the fuels used in our transportation system, which also uses a small portion of other fuels such as renewable fuels produced from corn, sugar cane, and soybeans.

Federal and state agencies regulate aspects of petroleum refining and the use of refined petroleum products for several purposes, including to protect human health and the environment, and to respond to concerns

[1]See GAO, *Energy Markets: Increasing Globalization of Petroleum Products Markets, Tightening Refining Demand and Supply Balance, and Other Trends Have Implications for U.S. Energy Supply, Prices, and Price Volatility,* GAO-08-14 (Washington, D.C.: Dec. 20, 2007).

[2]EIA is a statistical agency within the Department of Energy (DOE) that collects, analyzes, and disseminates independent information on energy issues.

regarding the nation's dependence on imported crude oil. Petroleum refining and the combustion of gasoline and diesel emit carbon dioxide, a greenhouse gas (GHG) linked to climate change. To address climate change and other concerns, the Environmental Protection Agency (EPA), the primary federal agency responsible for implementing many of the nation's environmental laws, along with the Department of Transportation (DOT) and the state of California recently proposed or strengthened five key environmental regulations as follows:[3]

- *Renewable Fuel Standard (RFS)*. Established in light of concerns such as climate change and the nation's dependence on imported crude oil, the RFS provides that U.S. transportation fuels must contain certain percentages of renewable fuels. Under the law establishing the program, volumes of renewable fuels were to increase over time, though EPA determines requirements annually and may reduce percentages under certain circumstances.[4]

- *Corporate Average Fuel Economy (CAFE) and GHG vehicle emission standards*. A coordinated program in which DOT establishes fleet-wide gas mileage or fuel economy standards and EPA establishes GHG emission standards for vehicle manufacturers.

- *Tier 3 Motor Vehicle Emission and Fuel Standards*. EPA's standards for vehicles and transportation fuels to reduce emissions of certain air pollutants.

- *Stationary source GHG requirements*. EPA's new requirements to address GHG emissions at new refineries and refineries that undertake major modifications.

- *Low Carbon Fuel Standard (LCFS)*. California's recently implemented LCFS requires reductions to the amount of carbon in California's transportation fuels. California is important for the domestic refining industry because it is the nation's largest consumer of petroleum-

[3]We use the term key environmental regulations to refer to these five regulations.

[4]The RFS was created in the Energy Policy Act of 2005, and then expanded through the Energy Independence and Security Act of 2007. See Pub. L. No. 109-58, § 1501 (2005) and Pub. L. No. 110-140, §§ 201-203, 210 (2007), codified as amended at 42 U.S.C. § 7545(o) (2013).

based transportation fuels. It also has the nation's third largest refining capacity, after Texas and Louisiana.

You asked us to provide information about the domestic petroleum refining industry and its market environment. This report examines what is known about: (1) major changes—including key environmental regulations—that have recently affected the domestic petroleum refining industry and (2) major factors that may affect the future of the domestic petroleum refining industry—including its production, profitability, and competitiveness in foreign markets.

To conduct this work, we reviewed information, including studies by federal agencies and consultants, and company financial regulatory filings; and summarized the results of interviews with a nonprobability sample of 32 stakeholders. Stakeholders included representatives from refining companies, environmental organizations, consultants, and officials from federal and state agencies. We also visited several refineries of selected refining companies. We selected these stakeholders to represent broad and differing perspectives on these issues based on recommendations from agencies, industry associations, and others. We took into account such factors as the location and size of companies' refineries. Because we used a nonprobability sample, the views of stakeholders are not generalizable to all potential stakeholders but provide illustrative examples of the range of views. Similarly, the conditions at the refineries we visited are not generalizable to all refineries. The stakeholder views we summarize were not necessarily supported by all types of stakeholders, though we identify differing views where appropriate. The stakeholders we contacted and information we reviewed identified a number of changes that have affected industry and factors that may affect its future, and we report on those that were most often cited. Based on our research and information from stakeholders, we identified five key regulations that were recently strengthened or proposed, though other regulations may also affect the industry. To illustrate major changes affecting industry over time, we summarized historical data from EIA. We took several steps to assess the reliability of EIA data, including reviewing documentation, interviewing EIA staff, and consulting with stakeholders. We determined the EIA data to be sufficiently reliable for the purposes of this report. To provide information about major factors that could affect the industry, we also reviewed

forecasts from EIA, the International Energy Agency (IEA),[5] and IHS,[6] and summarized projections through 2020 under different scenarios. While forecasts are subject to inherent uncertainties, we found these forecasts to be reasonable for describing a range of views about potential conditions of the domestic refining industry and major factors that will help determine these conditions.[7] Appendix I provides additional information on our scope and methodology, and appendix II lists the stakeholders we interviewed.

We conducted this performance audit from November 2012 to March 2014 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

This section describes the petroleum refining industry and the five key regulations that we reviewed.

Petroleum Refining Industry

According to data from EIA, there were 143 petroleum refineries in the United States as of January 2013, with a capacity to process 17.8 million barrels of crude oil per day.[8] While there are refineries in most regions of the country, most refining capacity (almost 90 percent) is located in the

[5]IEA is an international organization composed of 28 of the member nations of the Organisation for Economic Co-operation and Development that, among other things, collects energy data and provides research and analysis on ways to ensure reliable, affordable, and clean energy.

[6]IHS is a firm that provides comprehensive economic and financial information on countries, regions, and industries.

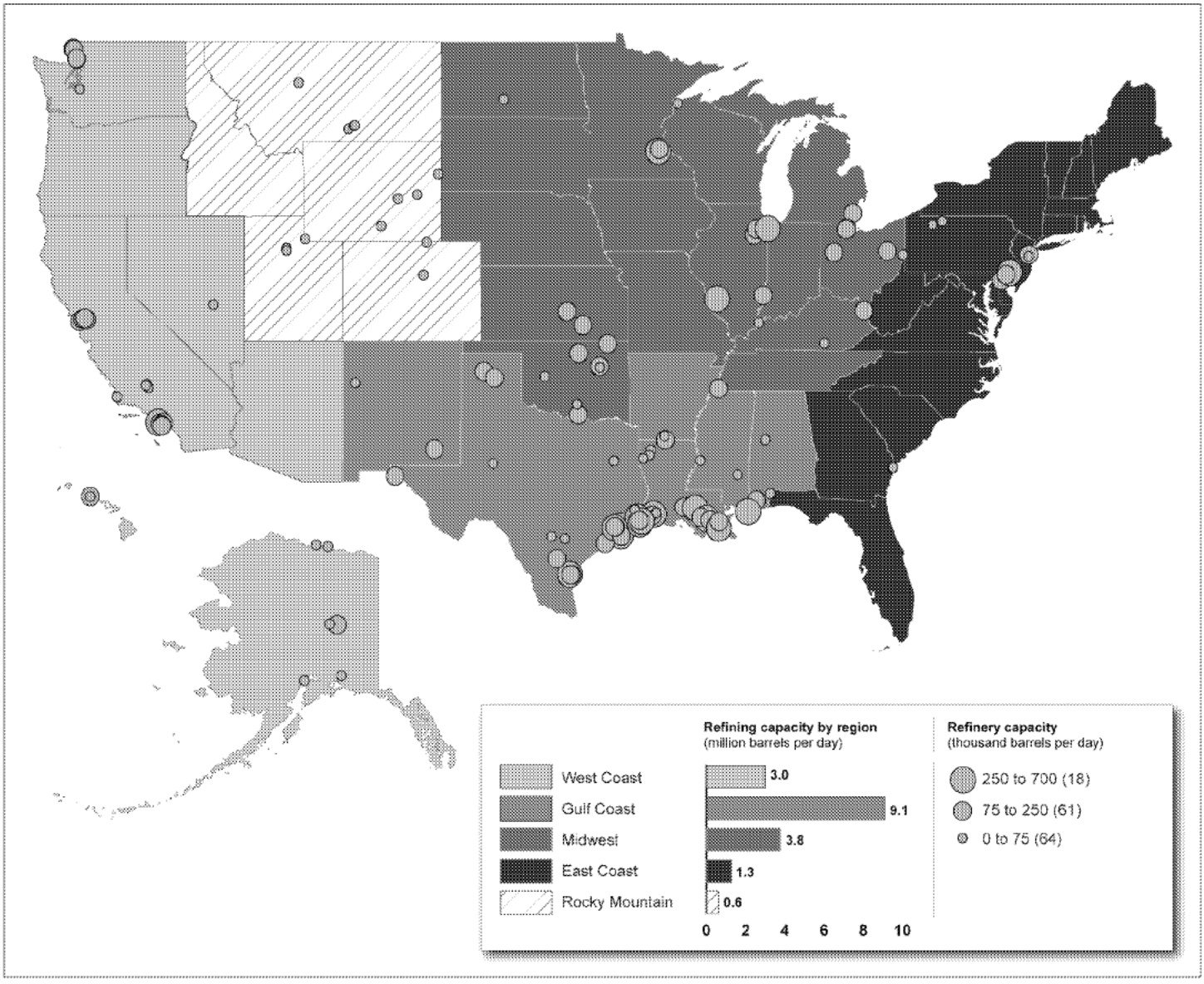
[7]Forecasts reflect assumptions and data available at the time the forecasts are developed. The forecasts we reviewed were developed at different points in time. For example, the 2013 EIA forecast we reviewed was released in April 2013 while IHS's forecast was released in October 2013. More recent forecasts may more fully reflect recent developments such as changes in economic growth and in crude oil production.

[8]A refinery's capacity refers to the maximum amount of crude oil designed to flow into the distillation unit of a refinery, also known as the crude unit.

Gulf Coast, West Coast, and Midwest regions (see fig. 1).[9] These refineries employed over 70,000 people in 2013.

[9]These regions are Petroleum Administration for Defense Districts, which were created during World War II to help organize the allocation of petroleum products. Many petroleum data collection organizations use these regions to organize their data for analytical purposes.

Figure 1: Location and Capacity of Petroleum Refineries and Capacity by Region as of January 1, 2013



Sources: GAO analysis of EIA data; MapInfo (map).

Note: These regions are Petroleum Administration for Defense Districts.

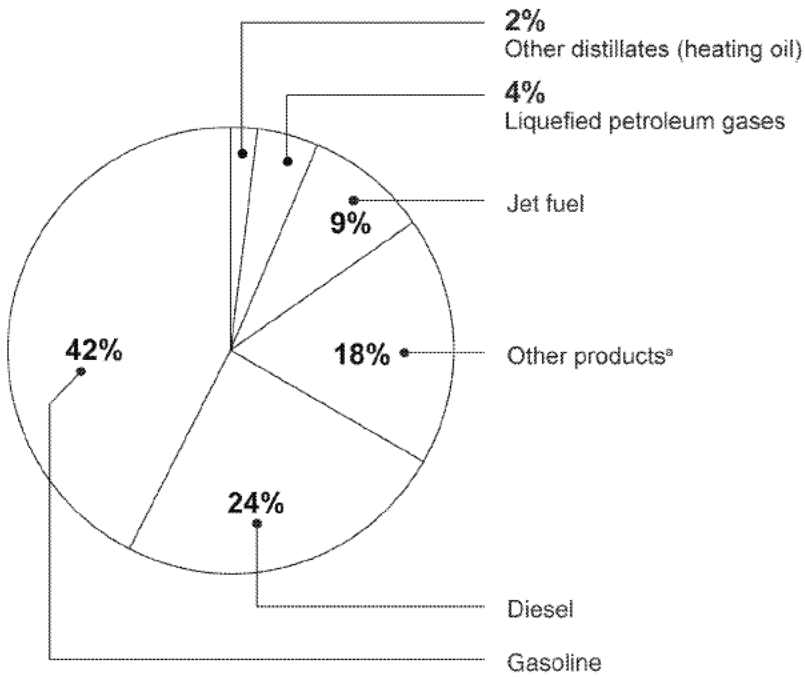
Refineries process crude oil into products primarily through a distillation process that separates crude oil into different fractions based on their boiling points, which can then be further processed into final products. One barrel of crude oil can be processed into varying amounts of

gasoline, diesel, jet fuel, and other petroleum products depending on the configuration—or complexity—of the refinery and the type of crude oil that is being refined. Through the addition of specialized equipment, refineries can be optimized—or "upgraded"—to produce greater proportions of specific types of products or to use different types of crude oil. For example, a coker unit upgrades the low-value residual oil from the distillation process into higher value products such as diesel, increasing a refinery's ability to process heavier crude oils.[10] As shown in Figure 2, from a barrel of crude oil, U.S. refineries primarily produce gasoline, diesel, and jet fuel that are used in the transportation sector, along with heating oil and liquefied petroleum gases such as propane used in home heating.[11]

[10]Coking processes use temperatures greater than 900 degrees Fahrenheit to thermally break molecules that make up feedstocks into products such as diesel, leaving behind petroleum coke—a coal-like material. Petroleum coke is used as a fuel input to produce electricity or as a raw material in the steel and aluminum industry.

[11]Except where noted, we use the term diesel to refer to what EIA calls distillate fuel oil. Distillate fuel oil is a general term that includes primarily diesel fuel, as well as fuel oils used for heating and electric power generation. In 2011, 90 percent of distillate fuel oil was diesel according to EIA data.

Figure 2: Petroleum Products Made from a Barrel of Crude Oil in the United States in 2012



Source: GAO analysis of EIA data.

[a]Other products include heavy fuel oil, petroleum coke, asphalt and road oil, and other miscellaneous products.

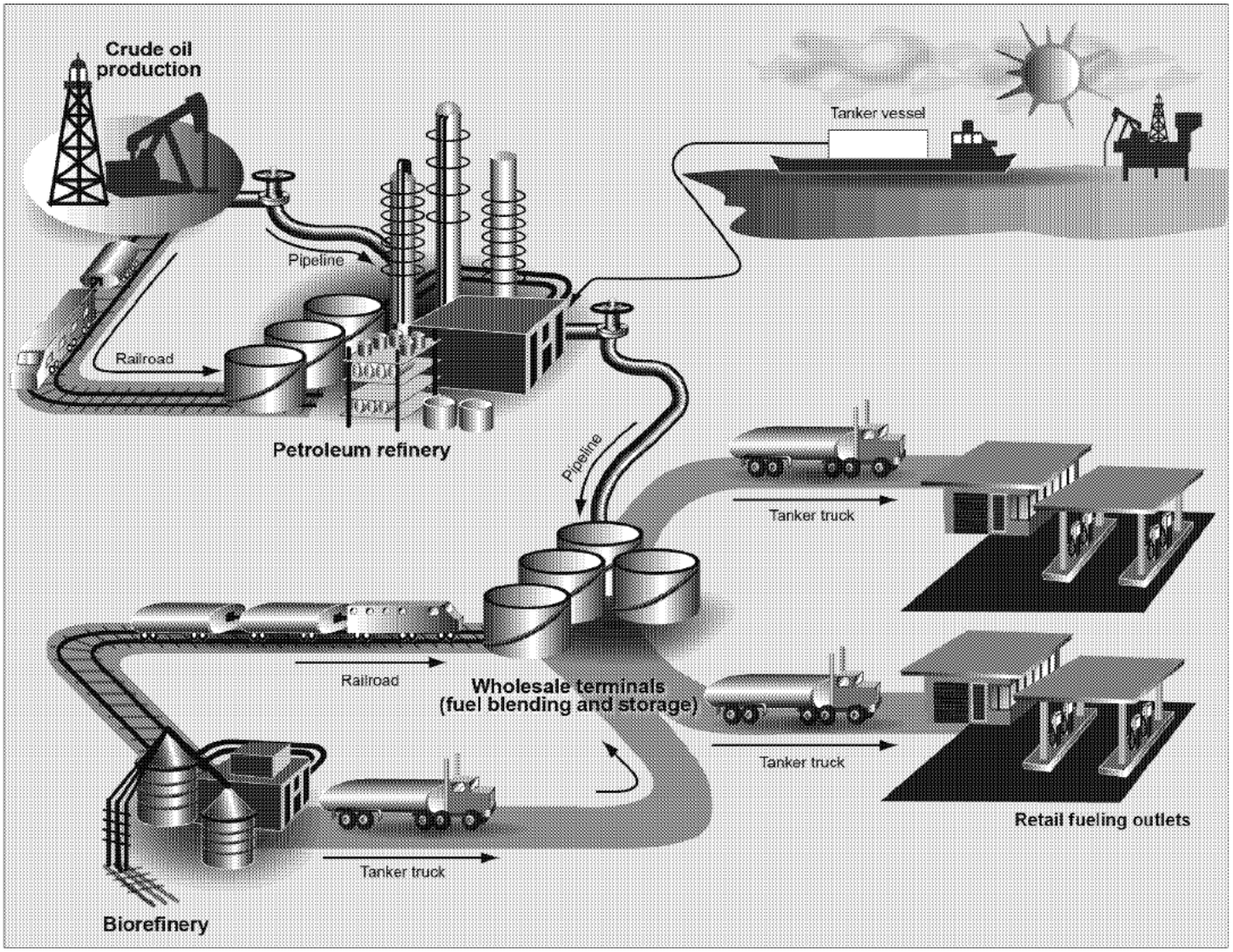
Note: Numbers do not add to 100 due to independent rounding.

The U.S. petroleum refining industry consists of firms of varying sizes that, in addition to operating refineries, may also have operations in other related industry segments: (1) the upstream segment, which consists of the exploration for and production of crude oil; (2) the midstream segment, which consists of pipelines and other infrastructure used to transport crude oil and refined products; (3) the downstream segment, which consists of the refining and marketing of petroleum products such as gasoline and heating oil; and (4) the renewable fuels segment, where biorefineries produce renewable fuels that are blended with petroleum products at wholesale terminals before being distributed to consumers. To varying degrees, refiners may primarily operate refineries—these are called merchant refiners—or may be integrated, participating in various other related industry segments. HollyFrontier Corporation is an example of a merchant refiner that purchases crude oil from unaffiliated producers and sells refined products to other companies operating retail fuel outlets,

while Chevron is an example of a fully integrated company, a refiner that also produces crude oil and operates pipelines and retail fueling outlets across the United States.

Crude oil, petroleum products, and renewable fuels are transported between market participants through an extensive supply infrastructure including pipelines, tanker vessels, rail, trucks, wholesale terminals, and retail outlets. (See fig. 3.) In 2012, refineries received the majority of their crude oil by pipeline (over 50 percent) and by tanker vessel (37 percent), with trucks and rail generally playing a more limited role according to EIA data.

Figure 3: Primary Transportation Infrastructure for Crude Oil, Petroleum Products, and Renewable Fuels



Source: GAO.

Note: Other means of transportation are also used to move petroleum and renewable fuels to wholesale terminals. For example, for ethanol, barges are also used to a limited extent.

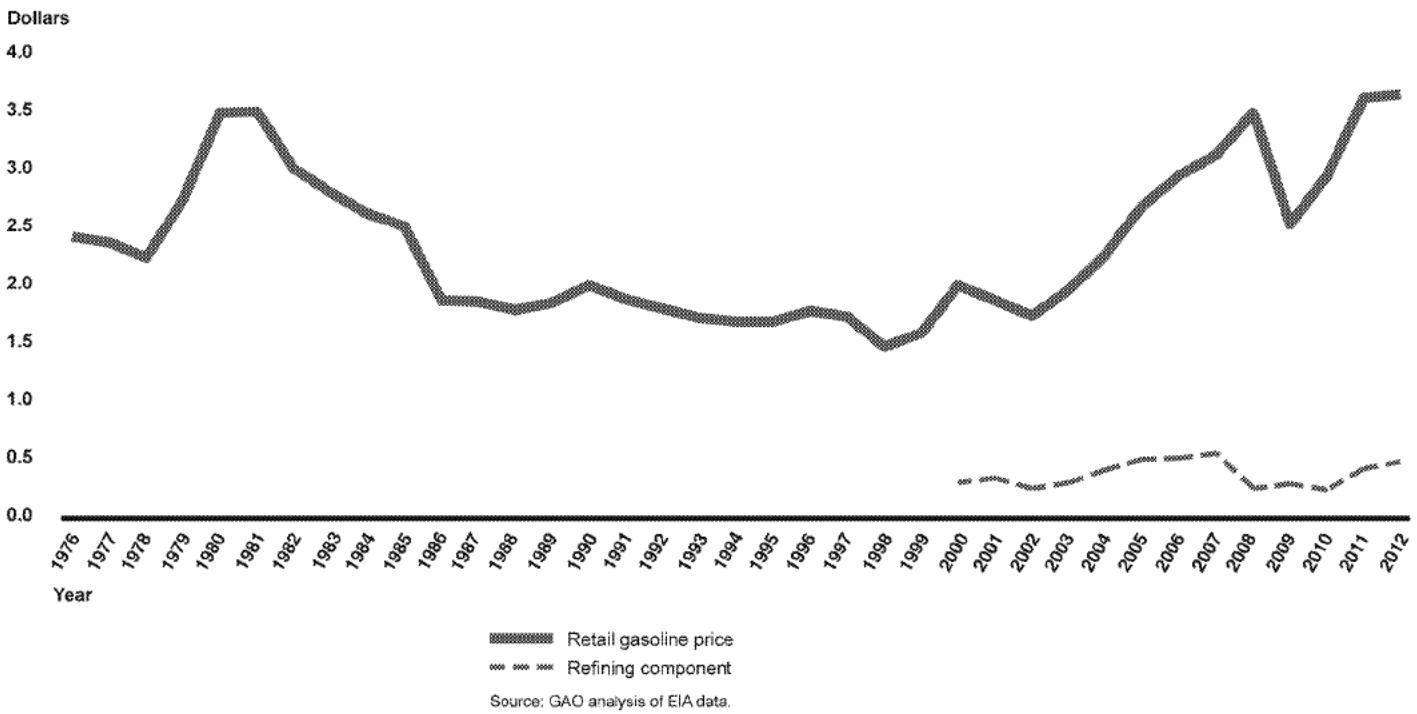
As we reported in 2007, according to industry officials and experts, the refining industry was a low-return industry for much of the prior two decades.[12] Retail prices for regular gasoline averaged $3.63 per gallon in 2012, the highest annual average price when adjusted for inflation since 1976, the earliest comparable data available from EIA.[13] Retail prices have declined in 2013—gasoline averaged $3.55 in the first half of 2013 and $3.18 in November 2013—but are still near historic highs. Market dynamics anywhere along the supply chain can influence consumer prices, beginning with upstream crude oil production, the production of renewable fuels, through downstream refining and retailing.[14] According to EIA data, increases in crude oil costs have been the largest component of the recent increases in gasoline prices. The refining component of prices—including labor, materials, energy, and other costs of the refining process, as well as profits to refinery owners—has fluctuated over time but has not increased in a significant way since 2000, when EIA began reporting estimates of the components of retail prices (see fig.4).

[12]GAO-08-14.

[13]Prices in this section were converted to 2012 dollars using the Bureau of Labor Statistics' Consumer Price Index.

[14]We have previously reported on several factors affecting these dynamics. See, for example: GAO, *Energy Markets: Estimates of the Effects of Mergers and Market Concentration on Wholesale Gasoline Prices,* GAO-09-659 (Washington, D.C.: June 12, 2009); GAO-08-14; and GAO, *Motor Fuels: Understanding the Factors That Influence the Retail Price of Gasoline,* GAO-05-525SP (Washington, D.C.: May 2, 2005). A more complete list of related reports is included at the end of this report.

Figure 4: U.S. Real Annual Average Retail Regular Gasoline Price and Refining Component of Retail Price, 1976-2012



Source: GAO analysis of EIA data.

Note: EIA began reporting estimates of the components of retail prices in 2000. Prices were converted to 2012 dollars using the Bureau of Labor Statistics' Consumer Price Index.

Key Regulations Affecting the Domestic Refining Industry

The five key environmental regulations affecting the domestic refining industry that we reviewed are concerned with various health, environmental, and other issues.

RFS

Under the RFS, since 2006, transportation fuels sold in the United States have been required to contain increasing amounts of renewable fuels such as ethanol and biodiesel. EPA is responsible for administering the RFS and annually issues regulations that establish the percentage of gasoline and diesel fuels that refiners, importers, and other obligated parties must ensure are renewable fuels. Congress established the RFS in light of concerns such as climate change and the nation's dependence on imported crude oil. As shown in figure 5, the law generally required that transportation fuels contain 9 billion gallons of renewable fuels in 2008, and that volumes increase 4-fold through 2022 to 36 billion gallons. The Administrator of EPA is authorized to waive the RFS levels established in the act if the Administrator determines—in consultation with the Secretaries of Agriculture and Energy—that implementing the requirement would severely harm the economy or environment, that there

is an inadequate domestic supply, or in certain other situations.[15] The major source of renewable fuels has traditionally been ethanol produced from corn; however, as we reported in 2009, the increased cultivation of corn for ethanol, its conversion into renewable fuels, and the storage and use of these fuels could affect water supplies, water quality, air quality, soil quality, and biodiversity.[16] Under the RFS' statutory provisions, the increasing amounts of renewable fuels are to primarily come from renewable fuels other than corn ethanol—called advanced biofuels—that meet certain criteria, including reducing GHG emissions by at least 50 percent compared with the gasoline or diesel fuel they displace.[17] According to EPA, achieving the RFS' statutory blending levels in 2022 could result in total benefits—including those related to overall fuel costs, energy security, health, and GHG effects—of between $13 and $26 billion and could reduce GHG emissions by 138 million metric tons of carbon dioxide equivalent emissions, equal to taking about 27 million vehicles off the road.[18]

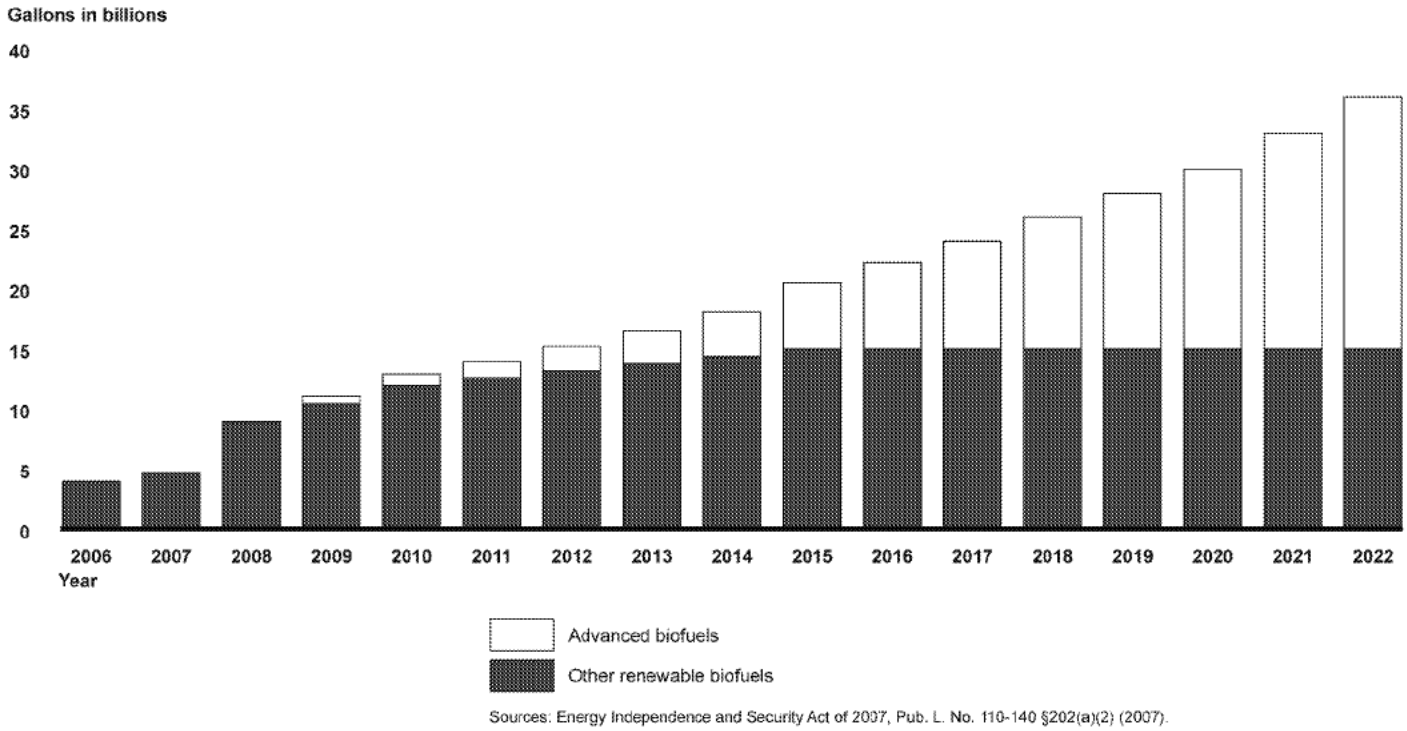
[15]EPA may also reduce the requirements for total renewable fuel and advanced biofuel in years when EPA reduces cellulosic biofuel or biomass-based diesel under applicable provisions. See 42 U.S.C. § 7545(o)(7)(D)-(E) (2013). EPA also must provide public notice and an opportunity for comment before making a determination for a waiver.

[16]See GAO, *Biofuels: Potential Effects and Challenges of Required Increases in Production and Use,* GAO-09-446 (Washington, D.C.: Aug. 25, 2009) and GAO, *Energy-Water Nexus: Many Uncertainties Remain about National and Regional Effects of Increased Biofuel Production on Water Resources,* GAO-10-116 (Washington, D.C.: Nov. 30, 2009).

[17]Beginning in 2015, the RFS' statutory provisions call for more than half of advanced biofuels to be produced from cellulosic materials, which can include perennial grasses, crop residue, and the branches and leaves of trees. Such cellulosic biofuels must generally achieve at least a 60 percent reduction in life cycle greenhouse gas emissions compared with the gasoline or diesel fuel they displace. However, according to EIA, all EIA forecasts and projections made since the passage of the Energy Independence and Security Act of 2007 anticipated large shortfalls between the RFS targets and the volumes of cellulosic biofuels. In addition, some advanced biofuels must be produced from biomass-based diesel, which generally includes diesel made from biomass feedstocks such as soybeans.

[18]EPA's estimates of the benefits and costs of the regulations presented throughout this report refer to monetized amounts. As not all benefits and costs can be monetized, these may represent a subset of overall benefits and costs of the regulations. We did not independently assess EPA's estimates of the benefits or costs of these regulations. We are examining EPA's economic analyses in relation to its adherence to guidance for regulatory analysis and expect to report later this year on these issues.

Figure 5: Renewable Fuel Standard Volumes Established by the Energy Independence and Security Act of 2007



Sources: Energy Independence and Security Act of 2007, Pub. L. No. 110-140 §202(a)(2) (2007).

CAFE and GHG Vehicle Emission Standards

The federal government has regulated vehicle fuel economy through CAFE standards since 1978 and, more recently, aligned these standards with new GHG vehicle emission standards in a joint national program aimed at reducing oil consumption and GHG emissions from the transportation sector.[19] CAFE standards are administered by the National Highway Traffic Safety Administration (NHTSA) and require that vehicle manufacturers meet fleet-wide average fuel economy standards for vehicles.[20] The Energy Independence and Security Act of 2007 instituted several changes to the CAFE standards and, in 2009, the administration announced a new program to increase vehicle fuel economy and reduce

[19]The Energy Policy and Conservation Act, Pub. L. No. 94-163 tit. III (1975) established CAFE standards effective beginning in model year 1978.

[20]The NHTSA, under DOT, is responsible for setting and enforcing CAFE standards, among other things.

vehicle GHG emissions, which was implemented by a joint rulemaking with NHTSA raising CAFE standards and EPA establishing the first GHG emissions standards for vehicles.[21] Although the CAFE and GHG vehicle emission standards are distinct, their targets were aligned for compliance purposes. NHTSA and EPA put the national program into place by issuing coordinated regulations covering vehicle model years 2012 to 2025.[22] As shown in figure 6, fuel economy standards for cars largely remained unchanged from 1990 through 2010, but vehicle manufacturers are now expected to meet increasingly stringent standards reaching the projected combined average fuel economy of about 50 miles per gallon by 2025—about 80 percent more efficient than required under the 2011 standards.[23] EPA estimated that the 2011-2025 standards may save consumers and businesses $1.7 trillion, reduce oil consumption by 12 billion barrels, and reduce GHG emissions by 6 billion metric tons over the lifetime of the vehicles sold during model years 2011-2025.[24]

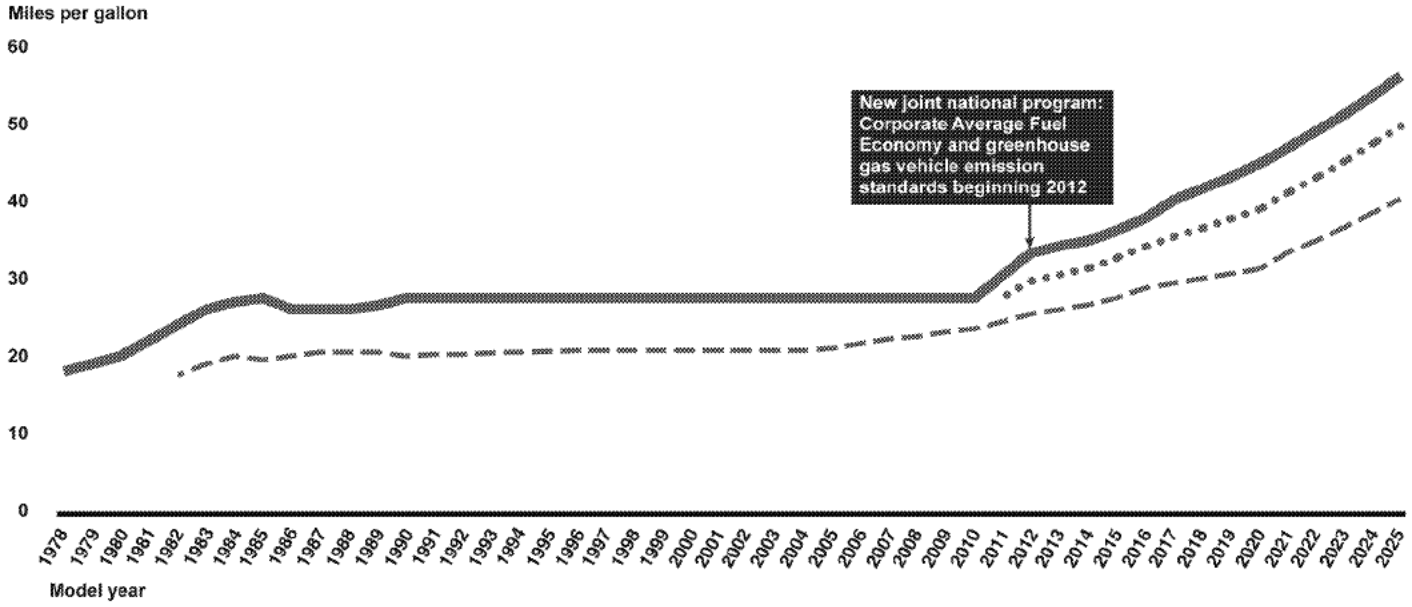
[21]The Energy Independence and Security Act of 2007, Pub. L. No. 110-140, tit. 1, subtit. A. Among other things, the act extended and codified NHTSA's reform of the CAFE standards by moving from a single fleet standard to an attribute-based standard for light trucks and passenger vehicles. The move from a single standard for a fleet to attribute-based standards for each vehicle model based on a vehicle's footprint was designed to address a number of downsides associated with moving to smaller vehicles, including potential safety implications and consumer choice limitations, see GAO, *Vehicle Fuel Economy: NHTSA and EPA's Partnership for Setting Fuel Economy and Greenhouse Gas Emissions Standards Improved Analysis and Should Be Maintained,* GAO-10-336 (Washington, D.C.: Feb. 25, 2010).

[22]In the coordinated rulemaking, NHTSA issued regulations establishing CAFE standards for model years 2012 to 2021 and identified nonbinding, projected standards for model years 2022-2025 due to a statutory requirement that allows the agency to set CAFE standards for not more than 5 model years in a given rulemaking. See 77 Fed. Reg. 62,624, 62,639 (Oct. 15, 2012). For further information on these rulemakings and the process used to set them, see GAO-10-336.

[23]The national program of CAFE and GHG vehicle emission standards is projected to result in an industry-wide fuel economy of 54.5 miles per gallon in 2025 if all GHG reductions are achieved with fuel economy technologies, but use of air conditioning refrigerant credits would lower the expected fuel economy to about 50 miles per gallon. Actual fuel economy will differ, depending on the fleet of vehicles sold and how manufacturers choose to meet the standards given certain flexibilities, including credits for improved air conditioning efficiency.

[24]In model year 2011, CAFE standards alone were in effect; from 2012-2025, both CAFE and GHG vehicle emission standards are in effect.

Figure 6: Corporate Average Fuel Economy (CAFE) Standards, 1978-2025



Sources: GAO analysis of EPA and National Highway Traffic Safety Administration data.

Note: Data from 2011 on are projected fuel economy based on final standards, and data for 2022-2025 are based on projected standards. Projected fuel economy for 2017-2025 used model year 2008 as the baseline. Actual fuel economy may differ, depending on the fleet of vehicles sold and how manufacturers choose to meet the standards given flexibilities in the standards, including credits for improved air conditioning efficiency. The figure indicates CAFE standards, which are generally aligned with EPA's greenhouse gas vehicle emission standards.

Tier 3 Motor Vehicle Emission and Fuel Standards

Under the Clean Air Act, EPA is authorized to establish certain standards for new motor vehicles and fuels to address air pollution that may reasonably be anticipated to endanger public health or welfare.[25] On May 21, 2013, EPA proposed the Tier 3 standards, and on March 3, 2014, EPA announced the final Tier 3 standards which establish more stringent

[25]Clean Air Act Amendments of 1970 §§ 202, 211(c)(1), Pub. L. No. 91-604, 84 Stat. 1676 (1970), codified as amended at 42 U.S.C. §§ 7521, 7545(c)(1) (2013) (commonly referred to as the Clean Air Act).

vehicle emission standards and reduce the sulfur content of gasoline.[26] (Because EPA finalized this rulemaking after the draft report was completed and provided to agencies, the views of stakeholders and other information on Tier 3 that we reviewed and summarize in the rest of this report relate primarily to the proposed standards. EPA stated that the final rulemaking is very similar to the proposal, and that EPA made some changes—including to the sulfur provisions—based on public input.) According to EPA, more than 149 million Americans experience unhealthy levels of air pollution that has been linked to respiratory and cardiovascular problems and other adverse health effects. Cars and light trucks are significant contributors to air pollution, and EPA estimated that the Tier 3 standards will reduce pollution from such sources. The standards set more stringent tailpipe emission standards for new vehicles and generally require refiners to lower the sulfur content of gasoline from 30 parts per million (ppm) to 10 ppm on an annual average basis by 2017, among other things.[27] According to EPA, reducing the sulfur content of gasoline allows emissions control systems to work more effectively for existing and new vehicles and would therefore enable more stringent vehicle emissions standards. EPA estimated that the Tier 3 standards would reduce on-highway vehicle emissions of nitrogen oxides, a pollutant that has been liked to respiratory illnesses, by 10 percent in 2018, and 25 percent in 2030.[28] According to EPA estimates, by 2030, annual emission reductions from the Tier 3 standards would generate annual benefits of between $6.7 and $19 billion and prevent up to 2,000 premature deaths annually. EPA estimated that the vehicle and fuel standards would cost approximately $1.5 billion in 2030, including costs for refiners to install and operate equipment to remove sulfur from

[26]For the proposed standards, see: 78 Fed. Reg. 29,816 (May 21, 2013). The final standards were signed by the Administrator of the EPA on March 3, 2014. (See: EPA, *Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards, Final rule*, accessed March 5, 2014, http://www.epa.gov/otaq/documents/tier3/tier-3-fr-preamble-regs-3-3-14.pdf.) The Tier 3 standards replace the current vehicle emission and fuel sulfur standards that were established in 2000 under Tier 2. See 65 Fed. Reg. 6698 (Feb. 10, 2000). Tier 2 standards generally reduced sulfur in gasoline from 300 ppm to 30 ppm on an annual average basis and were phased in from 2004 through 2007.

[27]EPA also will provide a 3-year delay for certain small refiners, as well as certain small volume refineries that processed 75,000 or fewer barrels of crude oil per day averaged over 2011.

[28]EPA, *Control of Air Pollution from Motor Vehicles: Tier 3 Motor Vehicle Emission and Fuel Standards Final Rule; Regulatory Impact Analysis.* (EPA-420-R-14-005, March 2014).

gasoline, as well as costs for vehicle manufacturers to improve the emissions performance of vehicles.

Stationary Source GHG Requirements

Under the Clean Air Act, EPA is authorized to take certain steps to address emissions from stationary sources, including refineries. EPA has regulated certain emissions of air pollutants from stationary sources for several decades, and EPA recently issued rules concerning how GHGs are to be included in certain existing permitting processes.[29] Specifically, permitting authorities[30] are to include GHG emission control requirements in Prevention of Significant Deterioration (PSD) permits and certain other permits issued to refineries and other stationary sources that trigger GHG emissions thresholds.[31] Since 2011, construction of any new refineries and certain refineries that are modified have generally been subject to the use of the "best available control technology" for GHG emissions. The best available control technology is determined for each facility based on an analysis of available technologies considering cost and other factors. According to EPA, in most cases, the best available control technology selected for GHGs are energy efficiency improvements. For example, for refineries, this could involve the installation of heat recovery units, which capture and use otherwise wasted heat in the refinery process. Such energy efficiency improvements can lower GHG emissions and other pollutants while reducing fuel consumption and saving money. Current regulations do not require existing facilities to take any steps to control GHG emissions unless they undertake a major modification. Examples of major modifications at a refinery include a significant expansion of crude

[29]Several industry groups have challenged EPA's determination that its regulation of GHG emissions from new motor vehicles triggered permitting requirements under the Clean Air Act for stationary sources that emit GHGs. The U.S. Court of Appeals for the D.C. Circuit upheld EPA's determination, and the Supreme Court granted a petition to review the D.C. Circuit's judgment and will consider the issue in 2014.

[30]Permitting authorities include EPA regions and approved state and local agencies. Some states are not approved to issue GHG permits. In these states, EPA regions issue GHG permits.

[31]Permits that address GHG emissions from new or modified stationary sources are known as PSD permits. PSD permits address GHG emissions only for those sources and projects meeting specific emission thresholds. In addition, operating permits, also known as Title V permits, can be triggered by sources that emit GHGs at specified emissions thresholds. Operating permits generally do not add new pollution control requirements but contain procedural requirements such as compliance monitoring and reporting. Thus, only PSD permits will impose GHG emission control requirements.

oil processing units, or installing new secondary processing units that would increase GHG emissions above specified thresholds.

LCFS

California's LCFS aims to lower GHG emissions by reducing the level of carbon in transportation fuels. Established by the California Air Resources Board (CARB) following state legislation and an executive order, the LCFS has been fully in effect since January 2011. The LCFS would change the mix of fuels and vehicles in California to reduce emissions throughout the fuel "life cycle"—which includes emissions associated with producing, transporting, distributing, and using the fuel. To reduce emissions, carbon intensity (CI) scores are used, which are to reflect each fuel's life cycle GHG emissions. Refiners generally are required to ensure that the overall CI score for their fuels—which can include gasoline, diesel, and their blendstocks and substitutes—meets the annual carbon intensity target for a given year. Unlike the RFS, which requires certain types of renewable fuels be used, under LCFS refiners can meet the CI reduction targets using a variety of low carbon fuel technologies. Low carbon fuel technologies include renewable fuels from waste and cellulosic materials, natural gas, electricity used in plug-in vehicles, and hydrogen used in fuel cell vehicles. The original LCFS statewide reduction targets for gasoline, diesel, and their substitutes started at 0.25 percent of 2010 values in 2011 and increased to 10 percent by 2020. However, in 2013 a state Court of Appeal found that CARB must correct certain aspects of the procedures by which the LCFS was originally adopted.[32] CARB officials subsequently announced a regulatory package would be proposed in 2014, and that the 2013 standards—a 1 percent decrease in carbon intensity from 2010 values—will remain in effect through 2014.

To comply with LCFS, refiners can produce their own low carbon fuels, buy such fuels from other producers to blend into their products and sell on the market, or purchase credits generated by others. Refiners can also generate credits—which can be banked and traded—if their use of low carbon fuels results in greater-than-required carbon intensity reductions. CARB estimated that the 2020 targets would reduce GHG emissions

[32]Specifically, the California Fifth District Court of Appeal allowed the LCFS regulations to remain in effect, but found that the manner in which the CARB adopted the LCFS violated certain procedural requirements of the California Environmental Quality Act and California's Administrative Procedures Act. As a result, CARB anticipates addressing the court's concerns with a regulatory package in 2014.

associated with the transportation sector in California by 10 percent in 2020, or 23 million metric tons of carbon dioxide equivalent.[33]

Market Changes and Key Environmental Regulations Likely Affected the Refining Industry

Stakeholders we interviewed identified three major changes that have likely recently affected the domestic petroleum refining industry.[34] First, crude oil production in the United States and Canada has increased, which has lowered the cost of purchasing crude oil for some refiners but poses some challenges related to crude oil transportation infrastructure constraints and the types of crude oils produced. Second, after many years of generally increasing domestic consumption of petroleum products, consumption has fallen since 2005, resulting in a smaller domestic market for refiners. Third, two key environmental regulations—CAFE and GHG vehicle emission standards and the RFS—have likely recently contributed to declining consumption of petroleum fuels, and compliance with the RFS has increased costs for some refiners.

Increased Crude Oil Production Has Lowered Crude Oil Costs for Some Refiners

U.S. and Canadian crude oil production has increased in recent years, leading to lower crude oil costs for some refiners, according to several stakeholders we contacted. According to EIA data, U.S. production of crude oil reached its highest level in 1970 and generally declined through 2008, reaching a level of almost one-half of its peak. During this time, the United States increasingly relied on imported crude oil to meet growing domestic energy needs. However, recent improvements in technologies have allowed companies that develop petroleum resources to extract oil from shale formations that were previously considered to be inaccessible because traditional techniques did not yield sufficient amounts for economically viable production. In particular, the application of horizontal drilling techniques and hydraulic fracturing—a process that injects a combination of water, sand, and chemical additives under high pressure to create and maintain fractures in underground rock formations that allow oil and natural gas to flow—have increased U.S. crude oil and natural gas

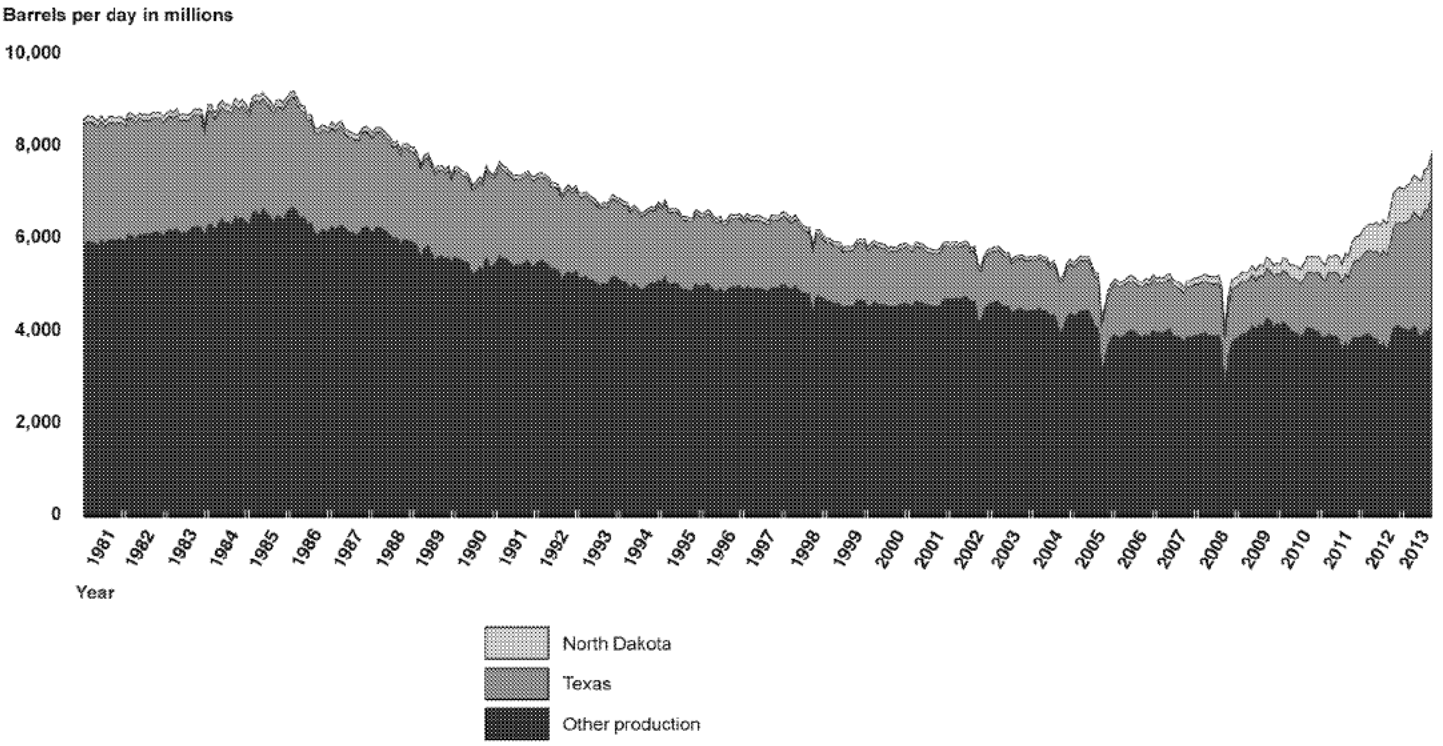
[33]CARB, *Staff Report: Initial Statement of Reasons Proposed Regulation to Implement the Low Carbon Fuel Standard, Volume I* (Sacramento, CA: Mar. 5, 2009).

[34]The stakeholder views summarized throughout this report were not necessarily supported by all types of stakeholders, though we identify differing views where appropriate.

production.[35] As shown in figure 7, monthly domestic crude oil production has increased by over 55 percent through September 2013 compared with average production in 2008. According to EIA, increases in production in 2012 and 2013 were the largest annual increases since the beginning of U.S. commercial crude oil production in 1859. Much of the increase in crude oil production has been from shale and other formations, such as the Bakken in North Dakota and the Eagle Ford in Texas, according to EIA data. Similarly, crude oil production in Canada—the largest foreign supplier of crude oil to the United States—has also increased significantly in recent years. From 2005 through 2012, total Canadian crude oil production increased by 32 percent and U.S. imports from Canada increased almost 50 percent.

[35]For more information, see: GAO, *Oil and Gas: Information on Shale Resources, Development, and Environmental and Public Health Risks,* GAO-12-732 (Washington, D.C.: Sept. 5, 2012).

Figure 7: Monthly Crude Oil Production in Texas, North Dakota and the Rest of the United States, January 1981-September 2013



Source: GAO analysis of Energy Information Administration data.

The rapid growth in U.S. and Canadian crude oil production has lowered the cost of crude oil for some domestic refiners that have the access and ability to process these crude oils. For example, West Texas Intermediate crude oil—a domestic crude oil used as a benchmark for pricing—was $17.60 per barrel less expensive in 2012 than Brent, an international benchmark crude oil from the European North Sea that was historically about the same price as West Texas Intermediate. Those refineries able to take advantage of these lower priced crude oils have benefited because crude oil costs are the largest cost for refiners.[36] However, all

[36]Closely related to increases in crude oil production, natural gas production has also increased in the United States in recent years. This increasing availability and lower prices for natural gas have been a benefit to domestic petroleum refiners since natural gas is an important energy source for many petroleum refineries, according to several stakeholders we contacted.

refineries may not have been able to take advantage of these crude oils to the same extent for two key reasons:

- *Transportation infrastructure challenges*. The development of domestic and Canadian crude oil production has created some challenges for U.S. crude oil transportation infrastructure because some of the growth in production has been in areas with limited transportation linkages to refining centers. Most of the system of crude oil pipelines in the United States was constructed in the 1950s, 1960s, and 1970s to accommodate the needs of the refining sector and demand centers at that time. According to DOE officials, this infrastructure was designed primarily to move crude oil from the South to the North, but emerging crude oil production centers in Western Canada, Texas, and North Dakota have strained the existing pipeline infrastructure. Though pipeline capacity has increased—investments increased pipeline capacity to deliver crude oil to a key Cushing, Oklahoma hub by about 815,000 barrels per day from 2010 through 2013—EIA reported that it has been inadequate. Because of these challenges, some refineries may not have been able to take full advantage of crude oil production increases or had to rely on other more expensive crude oil transportation options such as truck, rail, or barge. For example, two of the refineries we visited recently installed facilities to enable them to receive crude oil from North Dakota or Canada by rail. According to EIA data, while refinery receipts of crude oil by these methods of transportation is a small percentage of total receipts, they have increased 57 percent from 2011 to 2012. Infrastructure constraints have, according to EIA, contributed to discounted prices for some domestic crude oils.

- *Configuration constraints at refineries*. Increasingly, the crude oil being produced in the United States and Canada has different characteristics from the crude oils that some domestic refineries are configured to use. Production of new domestic crude oil has tended to be light and sweet, whereas a portion of new Canadian production has been heavy and sour crude oils.[37] To a certain extent, some

[37]Crude oil is generally classified according to two parameters: density and sulfur content. Less dense crude oils are known as "light," while denser crude oils are known as "heavy." Crude oils with relatively low sulfur content are known as "sweet," while crude oils with higher sulfur content are known as "sour." In general, heavier and more sour crude oils require more complex and expensive refineries to process the crude oil into usable products.

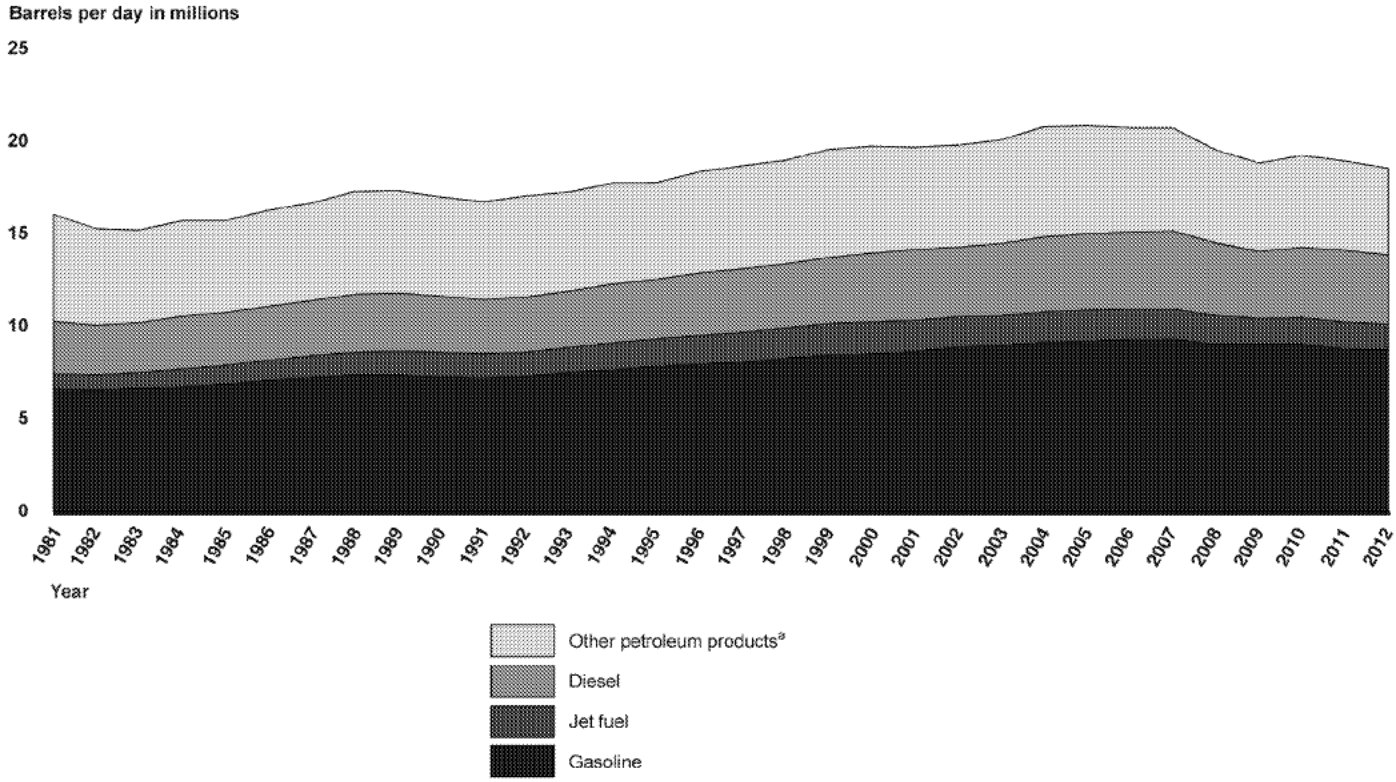
refineries can use these crude oils, but some have invested in new equipment in order to do so. For example, representatives of one refiner told us they had invested over $2.2 billion in a project including a new coking unit at a refinery to refine heavier and more sour crude oil from Canada.

Domestic Consumption of Petroleum Products Has Declined

After decades of generally increasing domestic consumption of petroleum products, consumption has declined since 2005, resulting in a smaller domestic market for refiners, according to several stakeholders we contacted. Overall, consumption of gasoline, diesel, and other petroleum products in the United States increased from 1983 through 2005. In 2007, EIA projected that U.S. consumption would increase by nearly 30 percent between 2005 and 2030. As we reported in late 2007, trends in domestic refining capacity had not kept pace with consumption growth, though it was unclear whether and for how long that market tightness would continue.[38] However, as shown in figure 8, domestic consumption of petroleum products overall peaked in 2005 at 20.8 million barrels per day, and it declined by 11 percent through 2012. Consumption of gasoline, diesel, and jet fuel peaked in 2007 and declined by over 8 percent through 2012. More recent data indicate that these trends may now be starting to shift, as EIA estimated that petroleum product consumption increased in the first 11 months of 2013 compared with the first 11 months of 2012.

[38]See GAO-08-14.

Figure 8: Domestic Consumption of Gasoline, Diesel, and Other Petroleum Products, 1981-2012



Source: GAO analysis of Energy Information Administration data.

Note: Data presented here include final consumption of fuels including petroleum-based fuels that have been blended with renewable fuels.

[a]Other petroleum products include kerosene, natural gas liquids, and other petroleum products.

According to several stakeholders we contacted and information we reviewed, a number of factors can affect consumption of petroleum products, including economic activity and crude oil and petroleum prices. For example, the recession of 2007 to 2009 reduced economic activity and demand for gasoline, and historically high gasoline prices have discouraged the use of gasoline. Stakeholders and information we reviewed also cited the effect of more stringent fuel economy standards and the RFS, which are discussed in the next section.

Several stakeholders told us that this broad shift from growing to falling consumption of petroleum products has affected the domestic refining industry because it has resulted in a smaller domestic market. The U.S. market is important for domestic refineries because U.S. refiners have

historically primarily sold their products domestically. On average, the United States exported almost 1 million barrels per day of domestic petroleum products from 2000 through 2005—less than 6 percent of U.S. refinery production. As discussed below, the refining industry has shifted sales to export markets amid a declining domestic market.

Two Key Regulations Have Likely Contributed to Declining Fuel Consumption and Compliance with One Has Increased Some Refiners' Costs

According to stakeholders and the information we reviewed, two recently strengthened key environmental regulations—the coordinated CAFE and GHG vehicle emission standards, and the RFS—have likely affected the refining industry by reducing the consumption of petroleum fuels, and compliance with the RFS has recently increased costs for some refiners, as well as other challenges. The other three key environmental regulations we reviewed have had minimal effects to date because they have either not yet been implemented or have generally not affected the industry in a major way, according to several stakeholders and information we reviewed.

CAFE and GHG Vehicle Emission Standards

According to information we reviewed and two stakeholders we contacted, CAFE and GHG vehicle emission standards have contributed to reductions in the consumption of petroleum fuels, but the extent is unclear. These standards aim to reduce oil consumption, and although they do not require changes at the refinery level, they can affect refineries indirectly by contributing to improvements in the overall efficiency of the vehicle fleet and, therefore, reducing fuels consumption. However, the National Academy of Sciences reported that it is difficult to isolate the effect of CAFE and GHG vehicle emissions standards from other factors that also affect consumption, such as higher fuel prices and changing driving habits.[39]

Stakeholders had different views on the extent to which CAFE and GHG vehicle emission standards have affected consumption of petroleum products. We reported, in 2007, that CAFE standards—along with higher fuel prices and other factors—contributed to a reduction in transportation

[39]See: National Research Council, *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards* (Washington, D.C.: The National Academies Press, 2002).

fuel consumption of 2.8 million barrels per day in 2002.[40] CAFE standards for cars largely did not change from 1990 through 2010, but they were strengthened beginning with model year 2011. According to EPA and DOE officials, since the standards did not change until recently, CAFE and GHG vehicle emissions standards did not cause the shift from growing consumption to declining consumption discussed previously. Regarding the strengthened standards, EPA estimated in 2010 that vehicles were expected to save 1.3 billion gallons of gasoline in 2013 compared with model year 2011 standards.[41] This is equivalent to about 1 percent of EIA's projection of gasoline consumption in 2013. A stakeholder told us that the CAFE and GHG vehicle emissions standards have likely had a relatively large impact on petroleum demand declines in the past few years, but it is unclear how much declining demand overall can be attributed to these standards versus other factors such as the recent economic recession and higher fuel prices. On the other hand, EPA and DOE officials, and a refinery representative told us that the most recent changes to CAFE and GHG vehicle emissions standards have had a marginal effect on petroleum demand so far. DOE officials also told us that the impact of the standards has been limited because they affect new car sales, and there are a relatively small number of new vehicles in the overall fleet.

RFS

Several stakeholders we contacted and information we reviewed cited three main effects that the RFS has had on the domestic petroleum refining industry or individual refiners—compliance has increased costs, declining domestic consumption, and investment uncertainty. In addition, EPA has been late in issuing annual RFS standards, and several factors contribute to the delays.

[40]See: GAO, *Vehicle Fuel Economy: Reforming Fuel Economy Standards Could Help Reduce Oil Consumption by Cars and Light Trucks, and Other Options Could Complement These Standards*, GAO-07-921 (Washington, D.C.: Aug. 2, 2007). Other factors contributing to reduced transportation fuel consumption include higher fuel prices. See: National Academies of Sciences, 2002.

[41]See: EPA, *Final Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards Regulatory Impact Analysis*, EPA-420-R-10-009 (Washington, D.C.: April 2010).

RFS Has Had Three Main Effects

Stakeholders we contacted and information we reviewed identified three main ways the RFS has affected U.S. petroleum refiners: (1) compliance has recently increased costs for some refiners, (2) required blending of renewable fuels has contributed to declining domestic consumption of petroleum-based transportation fuels, and (3) EPA's delays in issuing annual RFS standards may have contributed to investment uncertainty for some refiners. First, compliance with the RFS has recently increased costs for some refiners, according to information we reviewed and several stakeholders we contacted. Under the RFS regulations, refiners and other obligated parties are required to ensure U.S. transportation fuels include certain amounts of renewable fuels. To comply, refiners generally have two options—they can purchase and blend renewable fuels themselves, or they can pay others to blend or use renewable fuels by purchasing credits.[42] These credits can be freely traded, and prices for credits are established based on the market and generally reflect the stringency of requirements and the costs of incorporating additional renewable fuels into the transportation fuel system to comply with the RFS—if costs increase, credits prices would tend to increase as well. According to EIA, corn-based ethanol credit prices were low—between $0.01 and $0.05 per gallon between 2006 and much of 2012—because it was generally economical to blend up to or above the level required by the RFS. However, in 2013, prices for these credits increased to over $1.40 per gallon in July before declining to about $0.20 per gallon as of mid-November 2013.

Several stakeholders told us this increase in credit prices was primarily due to RFS requirements exceeding the capability of the transportation fuel infrastructure to distribute and the fleet of vehicles to use renewable fuels, referred to as the "blend wall." A refiner we spoke with also attributed the decline in credit prices in the second half of 2013 to EPA's statements expressing its desire to address the blend wall. We have

[42]EPA uses renewable identification numbers to track compliance with the RFS. In this report, we refer to these as credits. Renewable fuel producers, refiners, and fuel blenders, among others, can acquire credits under the RFS, though only refiners and importers of petroleum-based transportation fuels are obligated under the RFS. If a company generates more credits than it needs for compliance in a given year, excess credits can be sold to others, or saved for the following compliance year, subject to certain constraints.

Examples of the Effect of Increasing Renewable Fuel Standard (RFS) Credit Costs on Refiners

- According to company financial regulatory filings, the cost of credits increased almost 10-fold in the first 9 months of 2013 for one refiner compared with a similar period in 2012, and credit costs for another refiner more than doubled.
- A refining company representative told us that credit costs under the RFS exceeded the company's entire operating budget, including labor and electricity, for a period in 2013.
- As a result of higher credit costs, representatives of a refiner told us they have begun to consider the point at which their revenue may cease to cover the cost of purchasing credits. Representatives told us that, at a certain point, the company might need to decrease production levels, and thereby reduce its renewable fuel blending obligations.
- An ExxonMobil official said that RFS credit costs did not have a significant impact on the company's financial performance during the second quarter of 2013 because ExxonMobil meets the majority of its obligation by blending renewable fuels itself.

Source: GAO.

previously reported on the blend wall and other challenges to the increasing use of renewable fuels.[43]

While the RFS applies to all refiners in the same way, the effect of the rise in credit prices may depend on each refiner's situation. However, in comments to this report EPA stated that refiners experience the same compliance costs. As a result of higher costs, several stakeholders told us refiners could reduce production, produce more jet fuel, which is not subject to RFS requirements, or increase exports to nations where the RFS does not apply. (See app. III for more information about the blend wall, RFS credits, and views on how they have affected U.S. refiners.)

Second, the RFS has contributed to the declining domestic consumption of petroleum-based transportation fuels. Under the RFS regulation, refiners and other obligated parties are required to ensure U.S. transportation fuels include certain amounts of renewable fuels. As a result, refiners and other industry participants have blended increasing amounts of renewable fuels. For example, consumption of ethanol has increased almost 8-fold since 2000, from 1.7 billion gallons in 2000 to 12.9 billion gallons in 2012. According to EIA, increased ethanol use since 2007 displaced over 4 billion gallons of petroleum-based gasoline, or about 3 percent of gasoline consumption in 2012. As discussed previously, decreases in consumption affect refiners by decreasing the size of the domestic market. Since the RFS was established in light of concerns about the nation's dependence on imported crude oil, decreased consumption of petroleum products may further some of the objectives of the RFS.

Third, the RFS has contributed to investment uncertainty for refiners according to several stakeholders because EPA has not issued annual

[43]See: GAO, *Biofuels: Challenges to the Transportation, Sale, and Use of Intermediate Ethanol Blends*, GAO-11-513 (Washington, D.C.: June 3, 2011), and *Biofuels: Potential Effects and Challenges of Required Increases in Production and Use*, GAO-09-446 (Washington, D.C.: Aug. 25, 2009).

RFS standards on time since 2009.[44] Beginning in calendar year 2009 and through calendar year 2022, EPA is required to set annual blending percentages for total renewable fuels, advanced biofuels, cellulosic biofuels, and biomass-based diesel fuels by November 30 of the preceding calendar year.[45] However, as shown in figure 9, EPA has missed the statutory deadline to set annual percentages since 2009.[46] Most recently, EPA issued 2013 standards in August 2013—over 8 months late—and has not issued the 2014 standards. EPA proposed the 2014 standards on November 29, 2013, and EPA officials told us that they plan to finalize the standards in Spring 2014. The RFS compliance period—the time during which refiners and other parties incur obligations under RFS and can take steps to incorporate additional renewable fuels to create credits for compliance—is set by statute to be a full calendar year, and delays do not change this compliance period.[47] As a result, when the RFS standards are issued late, the industry has less time to plan and budget effectively. Several representatives of refiners told us

[44]The RFS has also posed compliance challenges for refiners and other market participants because of concerns over fraud in the market for RFS compliance credits. Credits must be validly generated in order for renewable fuel producers to be able to transfer or use them for compliance purposes. For example, EPA has issued several notices of violation alleging that five companies generated more than 170 million gallons of invalid credits without producing qualifying renewable fuels. These invalid credits had been used for compliance by many refining companies. EPA recently issued a Notice of Proposed Rulemaking, which describes a voluntary program known as the Quality Assurance Program to help assure that credits are validly generated. The notice proposes that voluntary third parties verify the validity of credits through steps such as verification of type of feedstocks, verification that volumes produced are consistent with amount of feedstocks processed, and verification that credits generated are appropriately categorized and match the volumes produced.

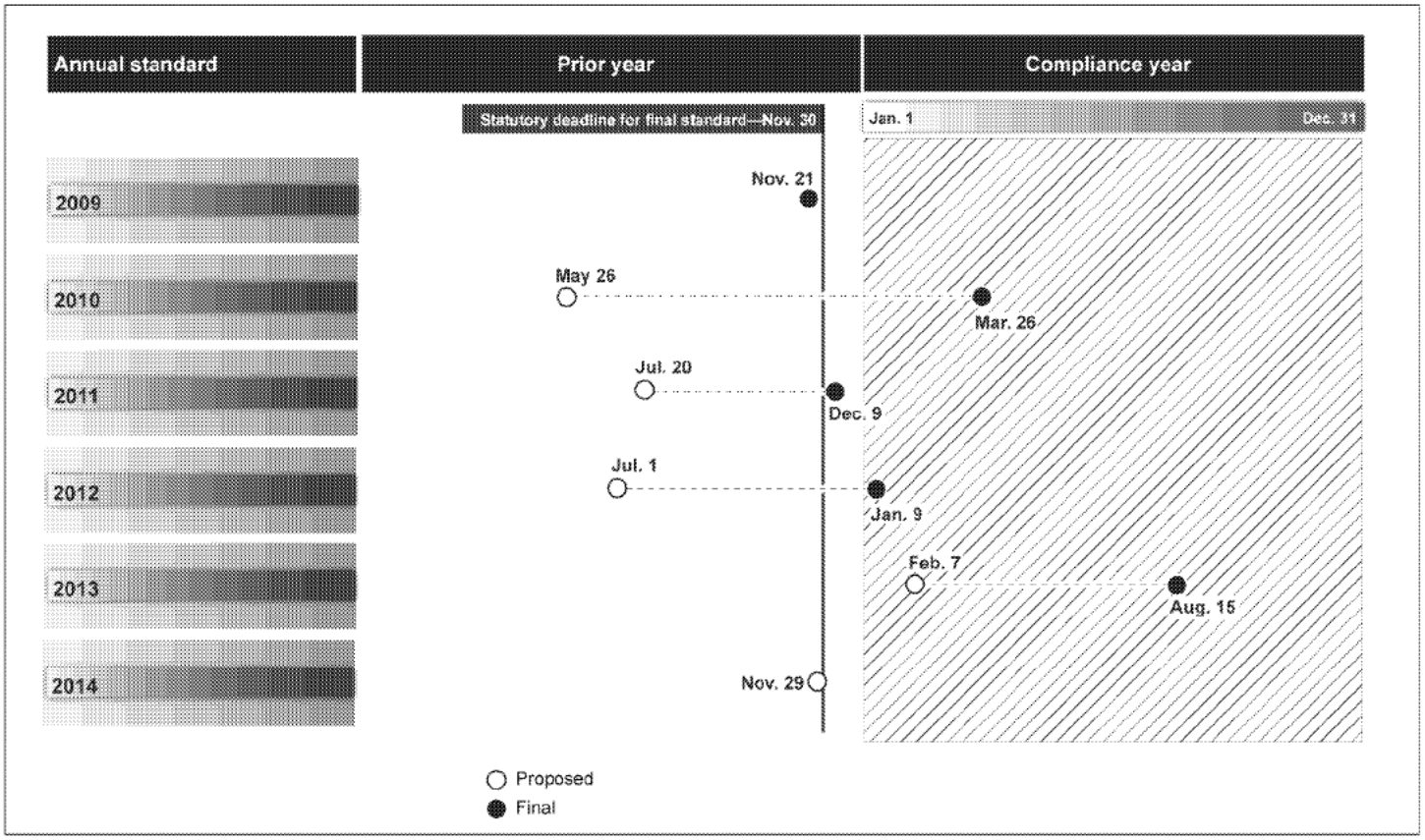
[45]The requirement for cellulosic biofuel began in calendar year 2010.

[46]For calendar years after 2012, EPA is also required to set biomass-based diesel volumes at least 14 months in advance. Though not shown in figure 9, EPA has also been late in issuing final standards for biomass-based diesel. EPA issued the final volume standards for 2013 in September 2012—about 10 months late. As of March 2014, EPA is 16 months late in finalizing standards for 2014 and 4 months late in finalizing standards for 2015. EPA proposed standards for 2014 and 2015 on Nov. 29, 2013, which have not been finalized.

[47]The RFS compliance deadline—the date by which refiners and other obligated parties must demonstrate compliance to EPA—is established by EPA through implementing regulations and has been adjusted by EPA. For example, EPA extended the compliance deadline for the 2013 compliance year from February 28, 2014 to June 30, 2014. The extension provided more time for refiners and other obligated parties to purchase and allocate credits.

that delays in issuing annual RFS standards increase uncertainty for refiners and renewable fuel producers, making it more difficult to make long-term planning decisions. One refining company representative told us that the company has reduced capital investments due to uncertainty related to the RFS. In contrast, EPA officials told us that there is no indication that delays have caused significant problems for refiners. They also noted that delays could actually make annual standards more robust since EPA then has more data upon which to base decisions.

Figure 9: Timeline of EPA's Issuance of Proposed and Final RFS Standards (2009-2014)



Source: GAO analysis of proposed and final regulations.

Note: The proposed and finalized dates are the regulations' publication dates in the Federal Register, not the dates EPA signed the regulations and publicly released them.

Regulatory Development Processes Contribute to EPA Delays in Issuing RFS Standards

EPA officials told us that delays in issuing RFS standards have largely been due to the length of the regulatory development process, which includes interagency and public reviews. Under the interagency review process, EPA is to follow certain procedures before publishing proposed or final regulations that establish annual RFS standards, including submitting draft proposed and final regulations to the Office of Management and Budget (OMB), which coordinates review of the draft regulations by other agencies, as well as conducting its own review. The interagency review process is to ensure that regulations are consistent with the President's priorities, among other things, and that decisions made by one agency do not conflict with the policies or actions taken or planned by another. Under the public review process, EPA must publish a proposed standard in the Federal Register, provide the public with the opportunity to review and comment on the proposal, and address comments received before finalizing the regulation. According to EPA officials, the interagency and public review processes can be time consuming because the RFS standards involve complex and controversial issues and balance competing agricultural, energy, and environmental policy interests.

In 2009, we recommended that EPA and other agencies track their performance for developing significant regulations against targeted milestones to identify opportunities for improvement.[48] We found that monitoring actual versus estimated performance could help agency managers identify steps in the process that account for substantial time and provide information necessary to evaluate whether time was well spent. In this regard, EPA stated in comments to our 2009 report that it uses an agency-wide Action Development Process that tracks 14 milestones as it develops proposed rules and additional milestones in developing final regulations. For example, EPA tracks when its senior management approves of a document describing the scope of the regulation and the analytical work necessary to develop it, known as the detailed analytic blueprint. In comments to our 2009 report, EPA stated that it used an internal tracking system along with additional information

[48]See GAO, *Federal Rulemaking: Improvements Needed to Monitoring and Evaluation of Rules Development as Well as to the Transparency of OMB Regulatory Reviews,* GAO-09-205 (Washington, D.C.: Apr. 20, 2009).

to develop regulatory management reports to EPA managers and executives. EPA stated at the time that this process helps management identify regulations that are off-track so that corrective steps can be taken to expedite their completion. EPA officials told us that they develop RFS regulations using the same procedures used for developing all EPA regulations. However, even with these systems, EPA has not met its statutory deadlines under the RFS in the five annual standards since 2009. EPA has not conducted a systematic review of its experience issuing RFS regulations to identify the underlying causes of repeated delays and has not identified changes in its approach that may help to avoid these delays in the future. Without such analyses and a plan to address the underlying causes of the delays, EPA risks repeating them.

Other Key Regulations

The other key regulations that we reviewed—Tier 3 standards, stationary source GHG requirements, and LCFS—have had minimal effects to date because these regulations either have not yet been implemented (Tier 3 standards) or, with respect to the other two, have not affected industry operations or costs in a major way, according to stakeholders and information we reviewed. Specifically:

- *Tier 3 standards*. Tier 3 standards were proposed on May 21, 2013, and EPA announced final standards on March 3, 2014; therefore, they have had not had a direct effect on industry to date.

- *Stationary source GHG requirements*. Representatives of two refiners told us that stationary source GHG requirements have been burdensome to refiners; however, several other stakeholders told us they have not had a major effect, and EPA officials told us they were aware of only three refineries that have received major source GHG permits since the GHG permitting program was implemented in 2011.[49] A refining company representative expressed concerns to us about the lengthy permitting process to authorize GHG emission increases. However, stationary source GHG requirements do not apply unless an existing refining facility proposes a major modification

[49]These refineries are the Hyperion Refinery and Energy Center in South Dakota, the Sinclair Wyoming Refinery in Wyoming, and the Diamond Shamrock, Valero McKee Refinery in Texas.

or a new refinery is proposed for construction.[50] An EPA official said that, in most cases, best available control technologies selected to comply with GHG requirements for refining facilities involve energy efficiency improvement measures that could help refiners reduce fuel consumption and save money. Further, EPA officials also explained that, in some cases, delays can occur when the refinery applicant has not provided EPA with the proper information to proceed with processing the permit.[51] The Clean Air Act requires that EPA approve or deny such permits within 12 months of receiving a complete application.

- *LCFS.* CARB, the entity responsible for implementing LCFS, said the regulation has had a modest effect to date—increasing fuel prices by about $0.01 per gallon. LCFS is the subject of several ongoing lawsuits,[52] which resulted in a 4-month delay in some regulatory activities and uncertainty about the status of the regulation.[53] According to a study conducted by a consultant on behalf of industry, the ongoing legal challenge to LCFS is creating uncertainty that

[50]A major modification refers to a physical or operational change that would result in a significant net increase in emissions of a regulated pollutant. However, in our prior work, we noted that it can be difficult for unit owners and regulators to know whether an air pollution permit is needed, because permitting rules governing applicability are complex and because applicability is determined on a case-by-case basis. See: GAO, *Air Pollution: EPA Needs Better Information on New Source Review Permits,* GAO-12-590 (Washington, D.C.: June 22, 2012).

[51]State permitting agencies may also issue GHG permits to refineries subject to EPA guidance.

[52]In a consolidated lawsuit, a Midwest ethanol group and an association of petroleum refiners claimed that LCFS discriminates against petroleum and ethanol firms from outside the state, and that the regulation was preempted by the Clean Air Act. Following appeal of an adverse District Court decision, in September 2013, the Ninth Circuit Court of Appeals largely upheld the LCFS by remanding one issue back to the district court for trial. Groups representing the energy industry and farmers, among others, have petitioned for the case to be reheard before the full Ninth Circuit. LCFS was also challenged in state court on administrative procedural grounds, which we describe above. CARB officials told us that they were optimistic about the outcome of these legal challenges, and said that their expectation is that if the courts do find against CARB on any particular issues, they would be able to narrowly adjust the regulations in order to address the court's findings and did not anticipate needing to wholesale replace or rework the regulations.

[53]In December 2011, a federal judge granted a preliminary injunction against the implementation of the LCFS, among other rulings. CARB appealed the decision and the Ninth Circuit Court of Appeals stayed the injunction in April 2012 and later reversed the District Court on these rulings.

discourages new investments by industry.[54] A refining industry trade association representative told us many refiners that previously invested in new components for their California facilities to process heavy crude oils may not be able to make an adequate return on investment since the LCFS disincentivizes the use of carbon intensive heavy crude oils. However, a CARB official noted that LCFS does not specifically prohibit any crude oil from being processed in California refineries, but rather it ensures that the LCFS' goal to reduce carbon intensity in transportation fuels is not affected by increased use of higher carbon intensity crude oils. Nevertheless, California refiners have thus far been able to comply with LCFS requirements by blending lower carbon intensive renewable fuels—such as Brazilian sugar-cane ethanol—or purchasing carbon credits as an alternative method of compliance.

Industry Outlook Depends on a Number of Factors

Stakeholders we contacted and information we reviewed generally suggest that the outlook of the U.S. refining industry depends on a number of factors, in particular: (1) future domestic consumption of petroleum products; (2) the extent to which key environmental regulations raise costs for domestic refiners; and (3) the extent to which domestic refiners will be able to export and compete in international markets.

Uncertain Future Domestic Consumption

The outlook of the U.S. refining industry depends on future domestic consumption of petroleum products, which is uncertain, according to stakeholders we contacted and information we reviewed. As discussed above, domestic petroleum product consumption declined by 11 percent from 2005 through 2012, and forecasts we reviewed project consumption of three major petroleum products—gasoline, diesel, and jet fuel—will be stable to slightly increasing through 2020, but not returning to high levels of the past.[55] Most of the scenarios in forecasts we reviewed from IHS

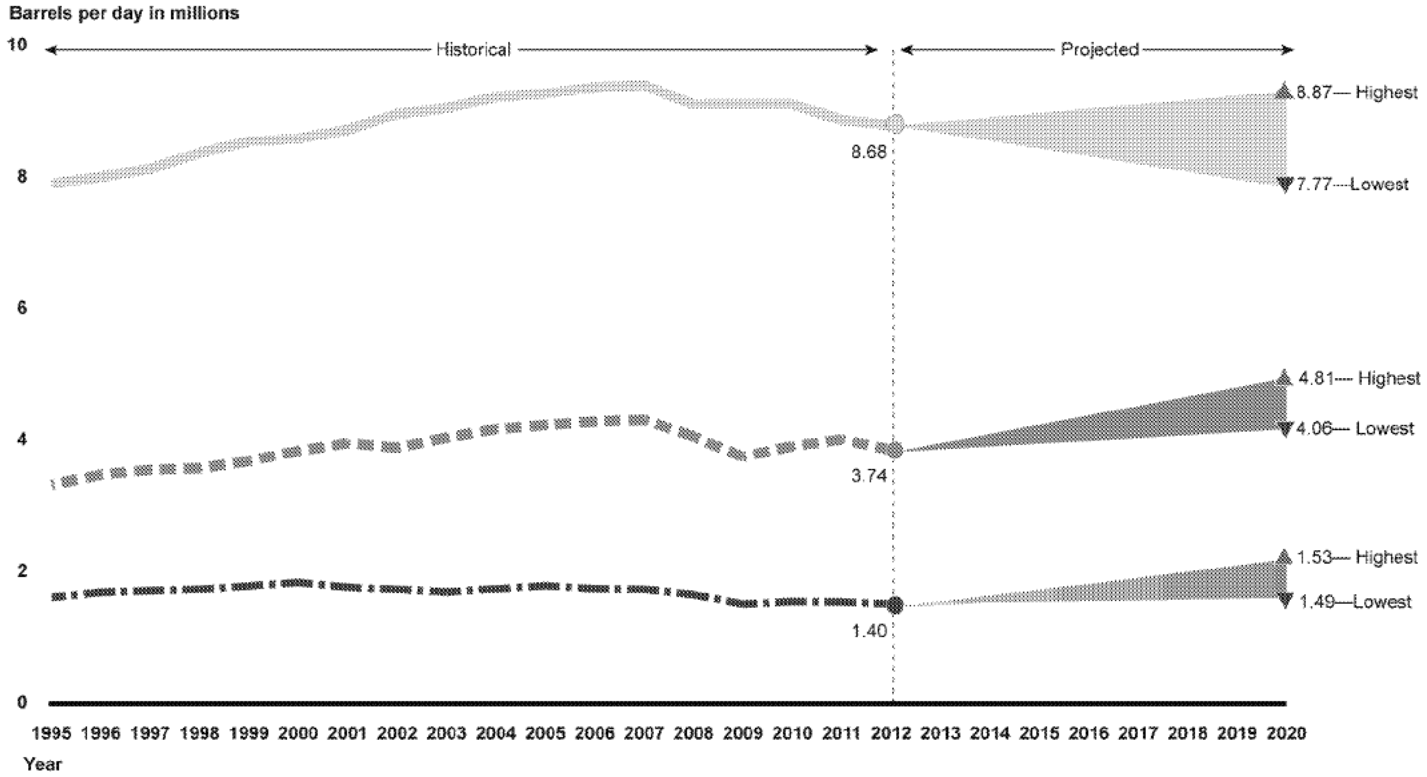
[54]The Boston Consulting Group, *Understanding the impact of AB 32* (Boston, MA: June 2012).

[55]The IEA forecast that we reviewed did not include a projection of U.S. consumption. EIA data track "product supplied," which approximately represents consumption of petroleum products because it measures the disappearance of these products from sources such as refineries, bulk terminals, and pipelines. Because the future depends on a multitude of factors that can be difficult to predict, EIA's 2013 and initial 2014 forecast include 28 scenarios with different assumptions about future conditions, such as economic growth or policy changes. (See app. I for additional information on our methodology.)

and EIA project total consumption of gasoline, diesel, and jet fuel to increase slightly by 2020, with projections ranging from a decline of 2 percent to an increase of 7 percent compared with 2012 consumption.[56] Expectations differ somewhat by fuel, with all EIA scenarios projecting gasoline consumption to decline or remain stable and diesel and jet fuel consumption to increase from 2012 to 2020 (see fig. 10). IHS projects an increase in the consumption of both gasoline and diesel, with more robust growth projected for diesel. Scenarios in the forecasts we reviewed generally project consumption to decline after 2020.

[56]Forecasts with more recent data and revised assumptions can indicate somewhat different levels of consumption. For example, in its 2013 forecast, IHS projected higher domestic consumption in 2020 than its previous year's forecast. EIA recently released initial results of its 2014 forecast, in which EIA projected lower domestic consumption in the reference scenario compared with the reference scenario in the 2013 forecast also discussed in this report. EIA attributed the difference, in part, to reduced expectations for vehicles miles traveled.

Figure 10: Historical (1995-2012) and Projected (2020) U.S. Consumption of Gasoline, Diesel, and Jet Fuel



Sources: GAO analysis of Energy Information Administration and IHS data.

Note: This figure displays the highest and lowest projections of U.S. consumption of gasoline, diesel, and jet fuel in the IHS and EIA forecast scenarios we reviewed. Specifically, for gasoline, the highest projection is IHS's forecast, and the lowest is EIA's "low or no net imports" scenario, which builds numerous assumptions to generate a hypothetical situation in which the United States eliminates net imports of liquid fuels. For diesel, the highest projection is EIA's "high economic growth" scenario, which assumes stronger growth in gross domestic product than in the reference scenario, a business-as-usual estimate that assumes current laws and policies are unchanged. The lowest projection for diesel is IHS. For jet fuel, the highest projection is EIA's "high economic growth" scenario, and the lowest is EIA's 2014 "reference" scenario.

Forecasts indicate that the level of future domestic consumption—the size of the domestic market for petroleum products—may affect future U.S. refinery production. In higher consumption scenarios, EIA's projections suggest higher refinery production than in scenarios with lower domestic consumption. Specifically, EIA projects that inputs to refineries—which track trends in refinery production—in 2020 would be about 1 million barrels per day higher in scenarios with higher domestic consumption—a

difference of about 7 percent of 2012 inputs. This difference is equivalent to about eight average-size U.S. refineries.

Several stakeholders we contacted and information we reviewed highlighted various factors that can affect future domestic consumption levels and thereby the size of the largest market for the production of U.S. refineries, including the following:

- *Economic growth*. Faster economic growth tends to increase consumption, and EIA's forecast scenario with higher economic growth assumptions projects greater future consumption of petroleum products than a scenario with low economic growth.
- *Crude oil and petroleum product prices*. Higher prices for crude oil and petroleum products tend to decrease consumption. For example, of the forecast scenarios we reviewed, the scenario that assumes high future oil prices projects lower domestic consumption of petroleum products.
- *Shifts in consumer behavior and demographic trends*. Changes in consumer behavior, such as reduced driving, along with demographic trends, such as an aging population and fewer young people with driving licenses, may reduce future consumption, according to EIA.
- *Key regulations*. Three of the key regulations we reviewed—CAFE and GHG vehicle emission standards, RFS, and LCFS—are expected to reduce domestic consumption of petroleum products in the future according to information we reviewed, though it is uncertain by how much. CAFE and GHG vehicle emission standards will require more efficient vehicles in the future, which may reduce future consumption of fuels. EPA estimated that the model year 2012-2025 standards are projected to reduce U.S. consumption of crude oil by 2.2 million barrels per day by 2025, equivalent to almost 15 percent of crude oil

used by refineries in 2012.[57] Similarly, under the RFS statute, unless waived by EPA, renewable fuels blending is required to double by 2022, which EPA estimated would reduce gasoline and diesel demand by 13.6 billion gallons, equivalent to about 10 percent of consumption in 2012.[58] Furthermore, CARB projected that the LCFS would help decrease future gasoline consumption in California. However, the extent to which these regulations will reduce future consumption depends on actions by regulators and market and other developments. For example, as discussed above, EPA has proposed to reduce renewable fuel requirements for 2014 due to an inadequate supply in light of the blend wall and other issues. EPA stated that the framework it applied to determine the proposed percentage standards could be appropriate for later years. Therefore, the potential for RFS to reduce petroleum-based fuel consumption will depend on the percentages finalized by EPA, which, in turn will depend on the development of advanced renewable fuel sources and market infrastructure and could be affected by legal challenges, as well as any legislative action to modify the RFS.[59]

Costs of Key Regulations

Stakeholders we contacted and information we reviewed generally suggest that the outlook of the U.S. refining industry will also depend on the extent to which some key regulations—RFS, Tier 3, stationary source GHG requirements, and LCFS—increase costs for refiners. In general, increasing costs for refiners may be absorbed by refiners themselves

[57] *The American Energy Initiative, Part 22: EPA Greenhouse Gas Regulations, Before the Subcomm. on Energy and Power of the H. Comm. on Energy and Commerce*, 112th Cong. (2012) (statement of EPA Assistant Administrator for Air and Radiation, Regina McCarthy). In addition, EPA specifically projected that the 2012-2016 CAFE and GHG vehicle emission standards would reduce domestic-refined gasoline consumption by about 7 billion gallons per year by 2020 and shrink domestic refining by about 3 percent by 2020. (See: EPA, *Final Rulemaking to Establish Light-Duty Vehicle Greenhouse Emission Standards and Corporate Average Fuel Economy Standards, Regulatory Impact Analysis* (Washington, D.C.: April 2010.)

[58] See EPA, *Renewable Fuel Standard Program (RFS2) Regulatory Impact Analysis*, EPA-420-R-10-006 (Washington, D.C.: February 2010).

[59] Similarly, while EPA issued GHG vehicle emission standards through 2025, NHTSA is required to set CAFE standards only 5 years at a time. CAFE standards for model years 2022-2025 have been presented by NHTSA as "augural" standards in the interest of aiding manufacturers in future product planning, as well as harmonization. A midterm evaluation by NHTSA and EPA may result in modifications to both EPA standards and NHTSA's augural standards. In addition, as discussed below, future requirements under the LCFS—and their effect on refiners—are uncertain due to various factors.

(i.e., by reducing their profits), be passed on to consumers through higher product prices, or both. The requirements on domestic refiners from the key regulations we reviewed generally are expected to collectively have a greater effect in the future, for example, by affecting more refiners (such as the stationary source GHG requirements to the extent that more refineries make modifications over time), or becoming more stringent in the future (such as the RFS), potentially increasing costs for refiners. In addition, several stakeholders told us that the uncertainty surrounding these regulations—and what costs they will impose—can affect the market climate within which refiners and other market participants make investment decisions such as whether to expand a refinery's ability to process different crude oils, or to build new advanced biofuel processing facilities. Such uncertainty can discourage investments in the industry overall.

- *RFS*. RFS may increase costs for some refiners depending on the percentages of renewable fuels required by EPA and on other factors. As discussed previously, costs for some refiners to comply with RFS rose in 2013, which some of the stakeholders we contacted attributed to concerns about the blend wall. The blend wall may remain a concern into the future because statutory renewable fuel blending requirements continue to increase—they more than double from 2012 to 2022—while the consumption of petroleum products is expected to increase only slightly. Several stakeholders told us that the effect of the RFS depends in particular on how EPA addresses the blend wall in the annual standards it issues in the future. Furthermore, EPA's timeliness in issuing the standards could also affect costs to the extent that delays affect the supply of renewable fuels, RIN prices, and refiners' ability to plan and budget effectively for compliance. Several representatives of refiners told us that future delays would contribute to investment uncertainty and higher costs for refiners. EPA officials said that they did not believe delays have affected market participants, and that the market for RFS credits has provided flexibility to refiners and other obligated parties. The extent to which the RFS increases costs in the future could also be affected by the outcome of any relevant litigation and of legislative proposals to change the RFS or how EPA implements it.

- *Tier 3*. According to EPA, to meet the Tier 3 fuel sulfur standards, refiners would need to install or upgrade hydrotreating capacity or

take other steps to reduce the sulfur content in fuels, which will likely increase industry-wide costs.[60] EPA projected that 67 out of 108 refineries would modify or purchase some equipment, and the capital costs of installing this equipment and operating costs to run it would average about $0.0065 per gallon, and total $804 million in 2017. An industry study of the Tier 3 proposal estimated that the regulation would increase costs by up to $0.09 per gallon for the highest-cost refinery, and several refinery representatives told us that Tier 3 would increase their costs.[61] The extent to which the refining industry will be affected by Tier 3 standards would have been greater had EPA decreased the per-gallon maximum allowable sulfur levels in gasoline—known as caps. In the final standards, EPA maintained the current 80 ppm cap, but had sought comment on whether it should decrease the cap to as low as 20 ppm. A stakeholder told us that Tier 3 would be manageable if EPA maintained the current caps, but far more difficult if the caps were lowered. One study we reviewed estimated that industry could incur additional capital expenses to achieve lower sulfur caps, ranging from $2 billion to over $6 billion dollars depending on the sulfur cap level in the final standards.[62]

- *Stationary source GHG requirements.* Several of the refining industry representatives we contacted expressed concerns that stationary source GHG requirements could become more stringent in the future. The current permitting framework is a case-by-case determination that takes into account costs, among other factors, and places no requirement on existing refineries unless they undertake a major modification. However, EPA entered a settlement in which the agency agreed to develop national performance standards—called New Source Performance Standards—for GHG emissions from new and modified refineries, and GHG emissions guidelines for certain facilities at existing refineries.[63] Although EPA has no current schedule to issue these standards, EPA committed in its settlement to issue them, and

[60]Hydrotreating removes sulfur by converting the sulfur into hydrogen sulfide gas and then to elemental sulfur.

[61]Baker & O'Brien Incorporated, *Addendum to Potential Supply and Cost Impacts of Lower Sulfur, Lower RVP Gasoline* (March 2012).

[62]Turner, Mason & Company, *Economic and Supply Impacts of a Reduced Cap on Gasoline Sulfur Content* (Dallas, Texas: February 2013).

[63]See: Settlement Agreement, *State of New York, et al, v. Environmental Protection Agency*, No. 08-1279 (D.C. Cir. Dec. 29, 2010).

several stakeholders expressed concern that future standards could impose more strict controls involving higher costs at refineries. A stakeholder told us that until EPA clarifies its approach for NSPS, many refiners will be reluctant to make certain investments in their refineries out of concerns that their investments may be unprofitable given future requirements. In addition, some companies may preemptively factor in the cost of emissions control technologies in their investment analyses.

- *LCFS.* Two stakeholders and a refining industry trade association told us that California refiners could face higher costs or compliance challenges unless CARB adjusts future low carbon fuel requirements. CARB has estimated that the cost of LCFS on gasoline and gasoline-substitute fuels is likely to range between an increase of $0.09 per gallon, and a decrease of $0.13 per gallon by 2020.[64] However, an industry study estimated that the LCFS could cost the refining industry an average of $0.70 per gallon by 2020.[65] The study also projected that 5 to 7 of 14 California refineries could cease production by 2020, and the LCFS could raise other compliance challenges because of insufficient supplies or consumer uptake of cellulosic, Brazilian sugar-cane ethanol, and other low carbon intensity fuels or vehicle technologies. CARB officials told us that if it proves more difficult than expected to meet LCFS requirements, CARB could introduce cost containment provisions to increase the availability of credits, such as through a "safety valve" to release additional credits at a set price, or by providing extra credits to certain compliance approaches.[66] Stakeholder told us that the decisions CARB makes with respect to the LCFS may affect California refiners' ability to stay in business and compete with refiners in other states and countries.

Extent to Which Refiners Can Export and Compete in Foreign Markets

While the domestic refining industry has increasingly relied on export markets, stakeholders and forecasts we reviewed indicate that the industry's future competitiveness is uncertain and that foreign markets present both challenges and opportunities for U.S. refiners.

[64]California Air Resources Board, *Low Carbon Fuel Standard 2011 Program Review Report* (Sacramento, CA: December 2011).

[65]Boston Consulting Group, *Understanding the Impact of AB32* (Boston, MA: June, 2012).

[66]For example, an electric car could receive three additional credits, thus reducing the need for low carbon fuels with limited availability.

Refiners Projected to Continue to Rely on Foreign Markets

Forecasts and data we reviewed from EIA and IEA suggest that future domestic refinery production levels may depend on exports of petroleum products.[67] Petroleum products are increasingly global commodities, and EIA data indicate that as domestic consumption has declined, refiners have looked to foreign markets to sell products. Since 1949, the United States had been a net importer of petroleum products, but this long-term trend reversed in 2011 when the United States became a net exporter of total petroleum products. According to EIA data, the United States recently exported more petroleum products than other leading exporters, including Russia, India, and Singapore, and petroleum product exports have represented an increasing share of U.S. refinery production. Exports of petroleum products represented 7 percent of refinery production in 2007 but increased to 17 percent in 2012. Major markets for U.S. exports include Central and South America, Mexico, and Europe, to which U.S. refiners sent nearly all diesel exports in 2012. The United States exports more diesel than gasoline, though U.S. refiners have been increasing exports of gasoline to Central and South America and Africa.[68]

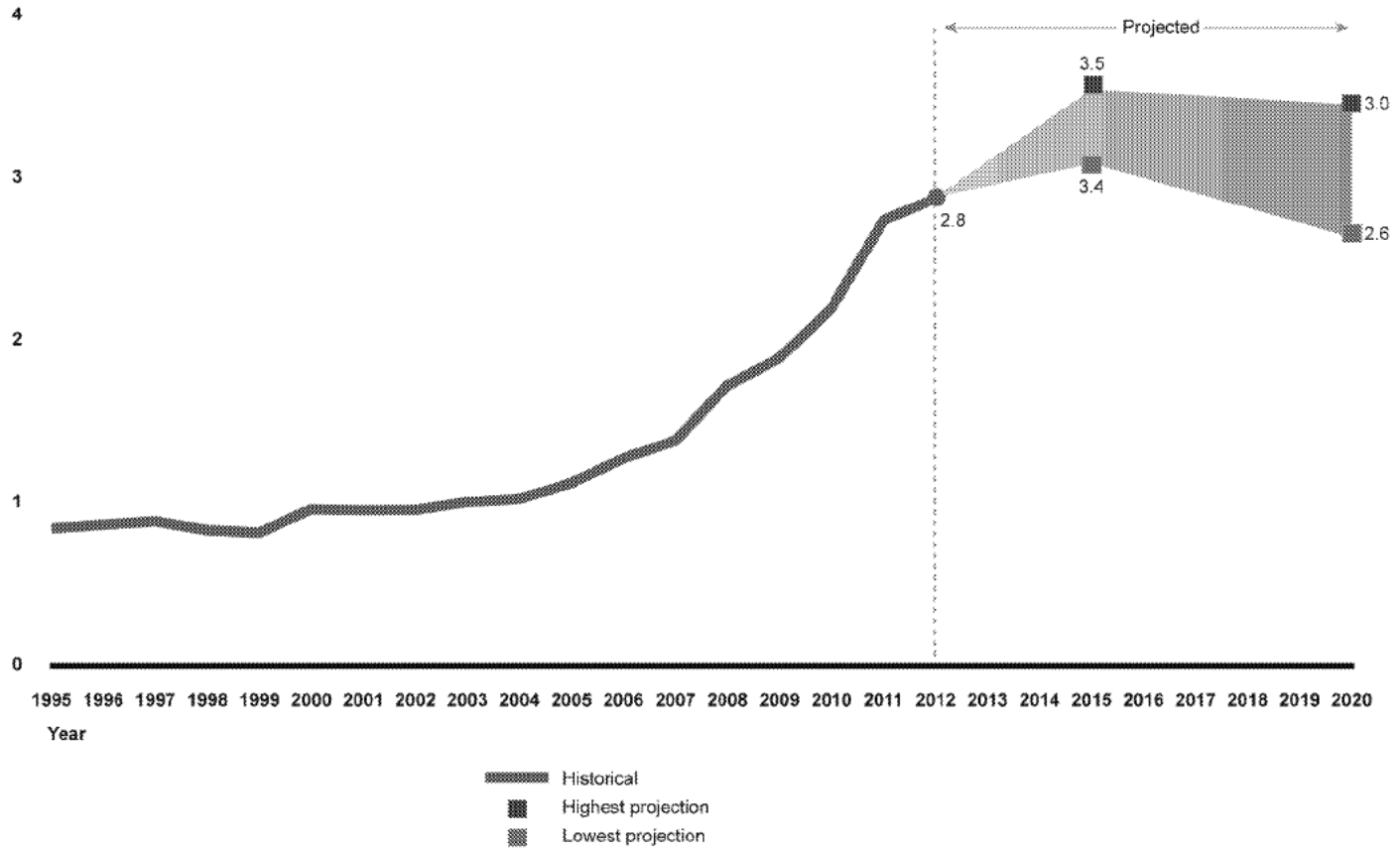
Forecasts that we reviewed generally project that exports will remain strong. According to most of the EIA and IHS forecasts we reviewed, exports of petroleum products are expected to increase until 2015, but the extent of the increase is unclear. As shown in figure 11, EIA scenarios project export levels from 2.6 to 3.4 million barrels per day by 2020, a relatively wide range.[69] Even the lowest projection for petroleum product exports in 2020 is above 2010 levels, indicating a general expectation that exports will remain strong.

[67]Unless noted otherwise, exports of petroleum products in this section refer specifically to finished petroleum products, natural gas liquids and liquid refinery gases, oxygenates (excluding fuel ethanol), and motor gasoline blending components. Finished products include finished motor gasoline, finished aviation gasoline, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, and other products.

[68]According to EIA, U.S. exports of diesel reached a record monthly high in July 2013, at 1.4 million barrels per day, and remained strong in August and September 2013. Continued growth in global diesel consumption has supported U.S. exports.

[69]We did not include IHS data in this figure because they are not public.

Figure 11: Historical (1995-2012) and Projected (2015 and 2020) U.S. Exports of Petroleum Products



Sources: GAO analysis of Energy Information Administration and IHS data.

Note: This figure displays the highest and lowest projections of U.S. petroleum product exports by the EIA forecast scenarios we reviewed. Specifically, the highest projection is from EIA's "greenhouse gas $25 and low gas prices" scenario, which assumes a fee for carbon emissions starting at $25 per metric ton in 2014, as well as high crude oil and natural gas resources consistent with EIA's "high oil and gas resource case." The lowest projection is from EIA's "low oil and gas resource" scenario, which assumes lower crude oil and natural gas resources than in the "reference" scenario.

Foreign Markets Could Present Both Challenges and Opportunities for U.S. Refiners

The extent to which domestic refiners are able to export their products will depend on the competitiveness of domestic refiners compared with foreign refiners, and stakeholders we contacted and information we reviewed highlighted both challenges that may inhibit competitiveness and opportunities that may increase it in the future. To sell products abroad, refiners need to be competitive—that is, they must be able to supply fuels that foreign purchasers want to buy at prices that are

attractive. Stakeholders and information we reviewed suggest that various factors may affect the U.S. refining industry's future competitiveness, including: (1) the balance between global refining capacity and global demand for petroleum products, (2) costs associated with environmental regulations, (3) exports to nations with stringent fuel standards, and (4) increasing domestic and Canadian crude oil production. More specifically:

- *Balance between global refining capacity and demand*. IEA data indicate that competition from foreign refiners may increase as global refining capacity is projected to exceed global consumption, creating an imbalance between global supply and demand that may affect U.S. refiners. According to IEA, global consumption of petroleum products was about 78.9 million barrels per day in 2012 and is projected to grow an additional 6 million barrels per day by 2020—with growth concentrated in Asia and the Middle East and consumption declining in Europe. But IEA projects refining capacity may grow even faster, resulting in excess capacity (refining capacity beyond that needed to meet consumption) of nearly 15.5 million barrels per day by 2020, in contrast to an estimated 4.8 million barrels per day of excess capacity in 2012.[70] Excess refining capacity is likely to result in greater competition in foreign markets overall, and some regions may present particular challenges. A large share of the new capacity is expected in China, India, and the Middle East, and representatives of two refiners indicated concern that capacity additions in some of those regions may present competition for U.S. refiners. Several other stakeholders were optimistic about domestic refiners' ability to compete in the future. According to IEA, capacity additions in China and India are intended to keep pace with growing consumption in those regions, but new Middle Eastern refineries are intended to be export facilities and may present increased competition to U.S. refiners.

- *Costs associated with environmental regulations*. As discussed above, the key environmental regulations we reviewed could collectively impose additional costs on the domestic refining industry. These costs could affect the industry's ability to compete internationally to the extent that foreign refiners do not face similar costs. In addition, regulatory uncertainty can affect refiners'

[70]Excess capacity may result in some refinery closures. IEA's New Policies Scenario projects 6.3 million barrels per day of global refining capacity may be at risk of closure in 2020, but the projected capacity at risk is outside of North America.

competitiveness if it inhibits the industry from making investments that would otherwise lower costs. Not all of the key regulations we reviewed would be expected to affect the industry's competitiveness. In particular, CAFE and GHG vehicle standards do not impose requirements on refiners. In addition, although RFS and Tier 3 standards could impose requirements with potential associated costs on some refiners, they would not apply to exported fuels—they apply only to fuels sold in the United States regardless of where they are produced.

- *Potential for increased exports to nations with stringent fuel standards*. In general, U.S. refineries are among the most sophisticated in the world and have generally been optimized to produce large proportions of cleaner-burning gasoline. IEA has pointed out that refiners in many parts of the world face challenges producing fuels that meet high product quality and environmental performance standards.[71] Therefore, some U.S. refiners may benefit from any trend toward higher quality and more stringent environmental performance standards. In this regard, actions refiners may take to reduce gasoline sulfur to comply with proposed Tier 3 standards could enable them to export to markets—such as Japan and much of Europe—that already require low sulfur gasoline.[72] On the other hand, representatives of a refiner pointed out that refiners could undertake such investments on their own—without Tier 3—if such exports were sufficiently economically attractive.

- *Increasing domestic and Canadian crude oil production*. As discussed above, increasing U.S. and Canadian crude oil production has led to lower cost crude oil for some refiners, providing a competitive advantage.[73] All of the forecast scenarios we reviewed from EIA, IEA, and IHS anticipate increases in U.S. crude oil production, but the projections are uncertain and vary widely—from 6.8 to 9.8 million

[71]See International Energy Agency, *World Energy Outlook 2013* (Paris, France: November 2013).

[72]According to EPA, Japan, the 30 nations that comprise the European Union, Albania, and Bosnia-Herzegovina have 10 ppm gasoline sulfur caps in place.

[73]Closely associated with this trend has been the increasing availability and lower costs of natural gas, which has also provided a benefit to U.S. refiners.

barrels per day in 2020 as shown in figure 12.[74] Projections are revised each year, and expectations for U.S. crude oil production in 2020 have increased in more recent forecasts. For example, the reference scenario in EIA's most recent forecast projects domestic crude oil production to approach a historical high of 9.6 million barrels per day in 2020, higher than the reference scenario from the prior year.[75] Canadian crude oil production—which accounted for about 16 percent of the crude oil used by U.S. refineries in 2012—is expected to increase as well: the reference scenario in EIA's international forecast projects that Canadian petroleum liquids production will increase more than 30 percent from 2012 levels, reaching approximately 5 million barrels per day in 2020.[76] The extent of the increase in future crude oil production can have implications for future petroleum product exports. For example, EIA's scenario that assumes more domestic crude oil and natural gas resources projects higher export levels than a scenario that assumes low crude oil and natural gas resources. Several stakeholders told us that various issues could mitigate U.S. refiners' ability to take advantage of growing crude oil supplies. In particular, it is unclear whether planned expansions in pipelines and rail transportation will keep pace with growing production, and these infrastructure expansions could be affected by regulatory actions to address pipeline and rail safety.[77] Similarly, several stakeholders told us that potential future increases in crude oil

[74]EIA expects most of the increase to come from onshore tight oil formations in the Bakken, Eagle Ford, and Permian Basin regions, though increases are likely in domestic offshore production as well.

[75]EIA's most recent forecast, the Annual Energy Outlook 2014 Early Release, contains reference scenario projections only. Projections for other scenarios were not available at the time of this report's publication.

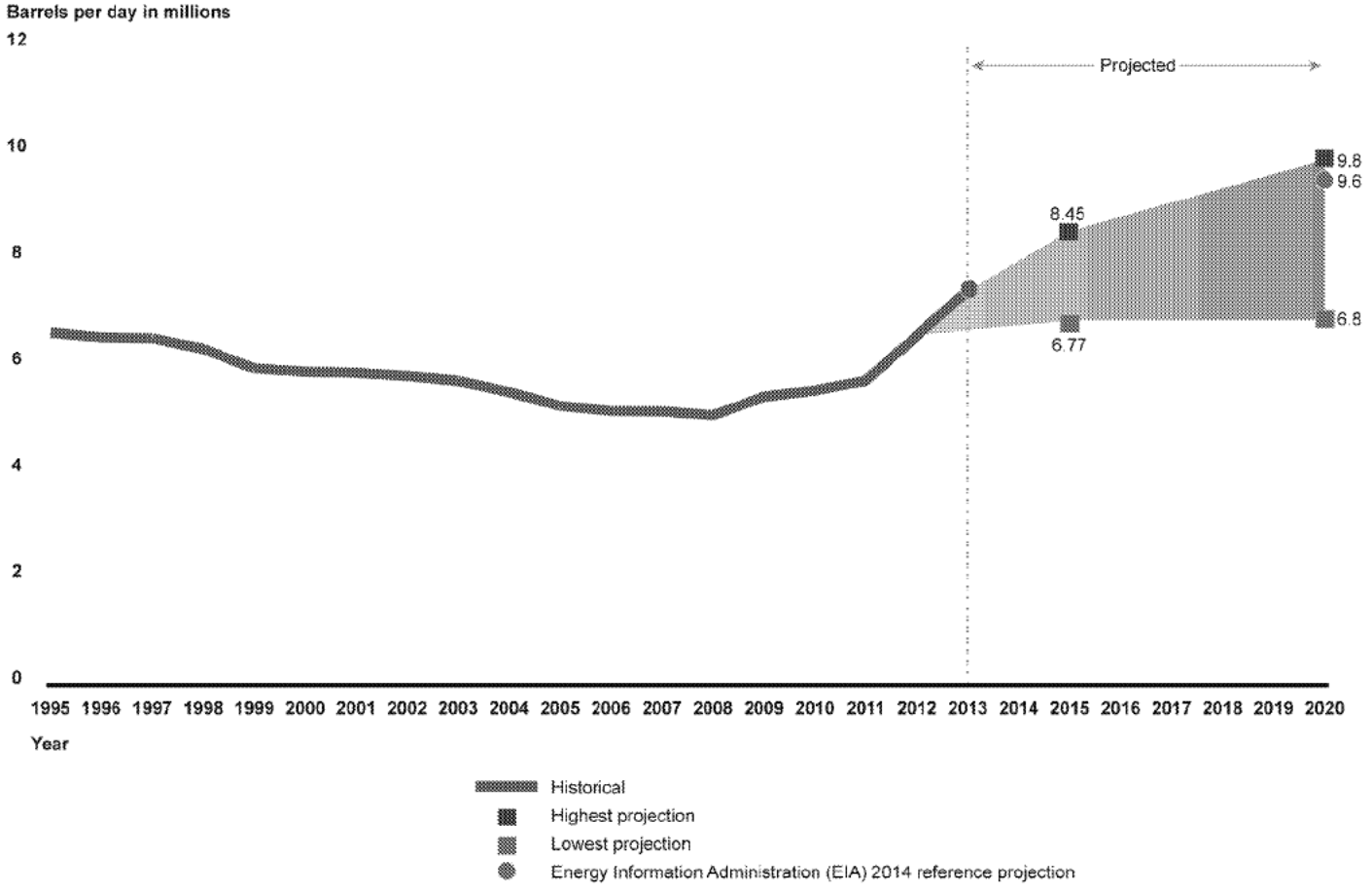
[76]According to EIA, petroleum liquids include crude oil and lease condensate as well as natural gas plant liquids, bitumen, extra-heavy oil, and refinery gains.

[77]For example, in July 2013, a deadly explosion occurred after a railcar carrying crude oil derailed in Quebec. In response to petitions it received following the accident, DOT's Pipeline and Hazardous Materials Safety Administration is considering whether to revise its regulations to improve railcar safety standards. See 78 Fed. Reg. 54849 (Sept. 6, 2013).

exports, which are currently minimal, could put pressure on regional crude oil prices, reducing the price advantage of U.S. refiners.[78]

[78]According to EIA data, total crude oil exports totaled 67,000 barrels per day in 2012—1 percent of total 2012 production. U.S. exports of crude oil must be licensed by the Department of Commerce, Bureau of Industry and Security. Current regulations specify limited conditions in which license applications will be approved, for example, for exports to Canada for use or consumption in Canada and that are transported other than through the Trans-Alaska Pipeline, for which some restrictions apply. Other applications for export licenses are to be reviewed on a case-by-case basis and generally will be approved if determined to be consistent with the national interest and the purposes of the Energy Policy and Conservation Act, and any additional statutory controls are satisfied. See generally 15 C.F.R. § 754.2 (2013).

Figure 12: Historical (1995-2013) and Projected (2015 and 2020) U.S. Crude Oil Production



Sources: GAO analysis of EIA and IHS data.

Note: This figure displays the highest and lowest projections of U.S. crude oil production by the IHS and EIA forecast scenarios we reviewed. Historical data for 2013 is the 9-month average of production through September. Specifically, the highest projection is EIA's "greenhouse gas $10 and low gas prices" scenario, which assumes 100 percent higher oil recovery and 50 percent higher undiscovered resources than in the reference scenario, as well as a policy change that applies a $10 per metric ton fee for carbon emissions throughout the economy beginning in 2014. The lowest projection, EIA's "high net imports" scenario, assumes 50 percent lower crude oil recovery than the reference scenario, along with changes that would create the need for increased imports. Also displayed is EIA's 2014 forecast reference scenario that assumes current laws and regulations are unchanged.

Conclusions

The domestic petroleum refining industry has been and is expected to continue to be affected by several profound changes. Some of these changes, such as the growth in crude oil production in the United States

and Canada, are reshaping the industry and creating new business opportunities. To take advantage of some of these opportunities, refiners and other market participants will need to invest—to upgrade refineries to be able to process different crude oils or to build pipelines or rail connections to move more crude oil from production to refining centers. Uncertainty can affect the market climate within which these investment decisions will be made. In this context, EPA's timeliness in issuing annual percentage standards under the RFS is important to help inform the investment decisions of the refining industry. In issuing annual percentage standards, EPA may waive the statutory volumes in whole or in part according to statutory criteria, which EPA has identified as potentially factoring in the blend wall, market developments, and other issues. However, EPA has missed the annual deadline for issuing annual standards under the RFS in most years. EPA has some systems in place to monitor and evaluate progress in developing regulations, which could provide useful information for understanding delays in RFS. But EPA has not identified the underlying causes of delays, and it has not developed a plan to address delays and, therefore, risks repeating delays. EPA delays in issuing RFS standards are important because delays do not change refiners' compliance periods accordingly and they therefore create uncertainty in the marketplace, potentially harming investment. Uncertainty among refiners, renewable fuel producers, and other market participants about how EPA will address the blend wall, which can be exacerbated by the prospect of litigation, can affect investment decisions and ultimately the availability and prices of the fuels they produce.

Recommendations for Executive Action

To improve EPA's ability to meet the annual statutory deadline for issuing annual RFS standards, we recommend that the Administrator of the EPA take the following two actions:

- Assess past experience to identify the underlying causes of delays in issuing annual RFS standards.
- Develop and implement a plan to address the causes of delays and help ensure RFS annual standards are issued on time.

Agency Comments and Our Evaluation

We provided drafts of this report to DOE, DOT, and EPA for review and comment. The three agencies provided technical comments on early or final drafts, which we incorporated as appropriate.

EPA also provided a letter in which it generally agreed with our findings and recommendations and clarified three topics discussed in the report.

First, regarding the effects of compliance with RFS, EPA asserted that refiners experience the same compliance costs regardless of whether they are fully integrated, with blending capabilities, or merchant refiners that purchase credits for compliance. Based on our work, we found the views of several stakeholders differed from EPA's. For example, in a 2011 study, DOE identified the degree to which a small refiner can actively blend production with renewable fuels is a large component that could contribute to economic hardship from compliance with the RFS.[79] In theory, market-based compliance systems—such as the RFS credit system—provide incentives for market participants to make decisions that would tend to equalize additional compliance costs over time. However, there can be physical infrastructure or contractual constraints, among various other factors, that could result in different outcomes in the short run. We added additional language to explain EPA's views in the report and in Appendix III.

Second, regarding the time-frame for RFS compliance, EPA stated that the RFS compliance deadline—the date by which refiners and other obligated parties must demonstrate compliance to EPA—is established through implementing regulations, not statute. EPA stated that it adjusted the 2013 deadline to provide additional time to demonstrate compliance. We acknowledge that EPA can extend the compliance deadline. However, the compliance period refers to the time during which refiners and other parties incur obligations under RFS and can take steps to incorporate additional renewable fuels to generate credits for compliance. This period is set by statute to be a full calendar year. We clarified language in the report to acknowledge EPA's ability to adjust the compliance deadline, essentially providing additional time for obligated parties to purchase credits, and its inability to adjust the compliance period.

Third, regarding Tier 3 standards, EPA announced the final standards while our draft was with the agency for comment. EPA stated that the final Tier 3 program is very similar to what it proposed, though EPA made

[79]Department of Energy, Office of Policy and International Affairs, *Small Refinery Exemption Study: An Investigation into Disproportionate Economic Hardship*, March, 2011.

some changes based on public input and updated its analyses. EPA provided technical comments to incorporate information from the final rule which we incorporated into the report, as appropriate. However, we were not able to obtain stakeholder and other views on the final Tier 3 rule for this report. See appendix IV for EPA's letter.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time we will send copies to the appropriate congressional committees and to the Secretaries of Energy and Transportation and the Administrator of the EPA. In addition, the report will be available at no charge on the GAO website at http://www.gao.gov.

If you or your staff members have any questions about this report, please contact me at (202) 512-3841 or ruscof@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix V.

Frank Rusco
Director, Natural Resources and Environment

Appendix I: Scope and Methodology

This report provides information on the domestic petroleum refining industry and its market and regulatory environment. Specifically, it addresses what is known about (1) major changes—including key environmental regulations—that have recently affected the domestic petroleum refining industry and (2) major factors that may affect the future of the domestic petroleum refining industry—including its production, profitability, and competitiveness in foreign markets.

To provide information on major changes that have affected the domestic petroleum refining industry and the future of the industry, we reviewed information including the following:

- studies by federal agencies and consultants,
- company financial regulatory filings, and
- proposed and final regulations and regulatory impact analyses.

To identify studies and other literature, we conducted searches of various databases, such as ProQuest and PolicyFile, for studies since published 2009. We also asked agency officials and other stakeholders we contacted to recommend studies.

Based on our research and information from stakeholders, we identified five key regulations that were recently strengthened or proposed: (1) the Environmental Protection Agency's (EPA) Renewable Fuels Standard regulations, (2) the Department of Transportation's Corporate Average Fuel Economy and EPA's greenhouse gas vehicle emission standards; (3) EPA's Tier 3 Motor Vehicle Emission and Fuel Standards; (4) EPA's stationary source greenhouse gas requirements; and (5) the state of California's Low Carbon Fuel Standard. We reviewed agency regulatory impact assessments and industry and other studies on the effect of these regulations on industry. Other regulations may also affect the industry.

We also summarized the results of semistructured interviews with a nonprobability sample of 32 stakeholders. (See app. II for a list of these stakeholders.) Stakeholders included representatives from refining companies, environmental organizations, consultants, and officials from federal and state agencies. We also visited several refineries of selected refining companies. We selected these stakeholders to represent broad and differing perspectives on these issues based on recommendations from agencies and industry associations, along with other information. For example, to select refiners, we considered, among other factors, the size

and location of their refineries, and whether they were vertically integrated or merchant refiners. When possible, we used a standard set of questions in interviewing stakeholders, including questions about the effect of the key regulations we reviewed. However, as needed, we also sought perspectives on additional questions tailored to these stakeholders' expertise and sought opinions from stakeholders on key issues, such as their views on the potential effects of exports on industry. Because we used a nonprobability sample, the views of these stakeholders are not generalizable to all potential stakeholders, but they provide illustrative examples of the range of views. Similarly, the conditions at the refineries we visited are not generalizable to all refineries. The stakeholder views we summarize were not necessarily supported by all types of stakeholders, though we identify differing views where appropriate. Stakeholders and information we reviewed identified a number of changes that have affected the industry and a number of factors that may affect its future, and we report on those that were most often cited.

To illustrate major changes over time and to describe the domestic petroleum refining industry, we summarized historical data from the Energy Information Administration (EIA) regarding such issues as capacity and location of refineries, crude oil production, and consumption of petroleum products. To assess the reliability of EIA data, we took several steps including reviewing documentation, interviewing EIA staff, and consulting with stakeholders. We determined the EIA data to be sufficiently reliable for the purposes of this report.

To provide information about the future of the domestic petroleum refining industry and major factors that could affect it, we also reviewed forecasts from EIA, the International Energy Agency (IEA), and IHS, and summarized projections through 2020 under different scenarios.[1] We selected these forecasts because they made projections through 2020, contained information broadly relevant to our report, covered multiple scenarios or offered a counterpoint scenario, and contained well-documented discussions of methodologies used and assumptions made.

[1]Department of Energy, Energy Information Administration, *Annual Energy Outlook 2013 with Projections to 2040*, DOE/EIA-0383(2013) (Washington, D.C.: April 2013); Department of Energy, Energy Information Administration, *Annual Energy Outlook 2014 with Projections to 2040, Early Release*, DOE/EIA-0383ER(2014) (Washington, D.C.: December 2013); International Energy Agency, *World Energy Outlook 2013* (Paris, France: November 2013); IHS, *US Energy Outlook 2013* (Englewood, CO: November 2013).

While forecasts are subject to inherent uncertainties, we found these forecasts to be reasonable for describing a range of views about potential conditions of the domestic refining industry and major factors that will help determine these conditions. We reviewed and compiled data from relevant scenarios and compared them where appropriate. Specifically, we reviewed all 27 scenarios in EIA's 2013 forecast, the reference scenario in EIA's 2014 initial forecast,[2] and IHS's forecast, and, in particular, highlight the scenarios representing the highest and lowest projection of gasoline, diesel, and jet fuel consumption; petroleum product exports; and crude oil production.[3] We identified some differences in the metrics reported in the four forecasts and did not make direct comparisons in these instances.

We conducted this performance audit from November 2012 to March 2014 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

[2]EIA's 2014 Annual Energy Outlook Early Release contains reference scenario projections only. Other scenarios were not available at the time of this report's publication.

[3]We highlight the following scenarios in the report: reference (2014), low or no net imports, high net imports, high economic growth, low oil and gas resource, greenhouse gas $25 and low gas prices, and greenhouse gas $10 and low gas prices.

Appendix II: List of Stakeholders

Federal Agencies	1. Department of Energy[1] 2. Department of Transportation 3. Environmental Protection Agency
Refiners	4. Chevron 5. CVR Refining 6. HollyFrontier Corporation 7. Marathon Petroleum Corporation 8. Monroe Energy 9. PBF Energy 10. Philadelphia Energy Solutions 11. Phillips 66 12. Shell 13. Tesoro Corporation 14. Valero Energy Corporation
Other	15. American Fuel and Petrochemical Manufacturers 16. American Petroleum Institute 17. Baker & O'Brien Incorporated 18. Prof. Severin Borenstein, University of California Energy Institute 19. California Air Resource Board 20. California Energy Commission 21. Citigroup Global Markets Inc. 22. Energy Policy Research Foundation (EPRINC) 23. Environmental Integrity Project 24. IHS 25. Prof. Christopher Knittel, Massachusetts Institute of Technology

[1]We also obtained views from officials at the Energy Information Administration within the Department of Energy.

26. Prof. Erich Muehlegger, Harvard Kennedy School
27. Muse Stancil
28. National Association of Clean Air Agencies
29. Natural Resources Defense Council
30. Sierra Club
31. Stillwater Associates
32. Turner, Mason & Company

Appendix III: Further Information Regarding the Renewable Fuel Standard, Compliance Credits, and the Blend Wall

To demonstrate compliance with the Environmental Protection Agency's (EPA) annual blending requirements under the Renewable Fuel Standard (RFS), refiners use renewable identification numbers (RIN), which we refer to in this report as credits. A RIN is a unique 38-character code that renewable fuel producers and importers assign to each gallon of renewable fuel produced or imported. To demonstrate compliance with the RFS, refiners and importers must provide sufficient RINs for the volume of gasoline and diesel they produce for use in the contiguous United States and Hawaii. For example, to comply with the 2013 total renewable fuels standard requiring that renewable fuels compose at least 9.74 percent of gasoline and diesel, a refiner selling 100 million gallons of gasoline would have to provide 9.74 million total RINs to EPA. Refiners can obtain RINs by purchasing and blending renewable fuels themselves, or they can purchase RINs from renewable fuel producers, importers, blenders, other refiners, or other RIN-holding entities. RINs are valid for the calendar year in which they were generated, and up to 20 percent of a year's standard can be met with RINs from the previous year. Refiners and other obligated parties with more RINs than needed to meet the year's blending standard can hold them for use in the following year or sell them to another party that needs additional RINs to comply with the blending standard.

Prices for RINs reflect the cost of renewable fuels compared with the petroleum fuels they displace, the stringency of annual blending percentage standards, and other factors, and have varied over time. According to the Energy Information Administration (EIA), between 2006 and much of 2012, corn-based ethanol RIN prices were low—between $0.01 and $0.05 per gallon—because it was generally economical to blend up to or above the level required by the RFS. However, RIN prices for corn-based ethanol increased to over $1.40 per gallon in July 2013. Several stakeholders told us this increase in RIN prices was primarily due to RFS requirements exceeding the capability of the transportation fuel infrastructure to distribute and the fleet of vehicles to use renewable fuels, referred to as the "blend wall." EPA officials told us that high corn prices, which made ethanol more expensive relative to gasoline, also contributed to higher RIN prices during this period. These RIN prices have since come down to about $0.20 per gallon as of mid-November 2013. A refiner attributed this decline to EPA's statements expressing its desire to address the blend wall.

The blend wall exists because blending more than 10 percent ethanol with gasoline (called E10) is affected by constraints such as the limited availability of vehicles that can use higher ethanol blends.[1] In addition, higher ethanol blends are less widely available than E10 and must be priced at a discount to encourage greater consumption, according to EIA. EPA officials recently said the blend wall would be reached in 2014 when about 13.2 billion gallons of E10 could be consumed.[2] Blending additional renewable fuels can be difficult and costly once the blend wall is reached because significant volumes of non-ethanol renewable fuels must be available, consumers must be encouraged to purchase additional higher blends of ethanol, and other market participants must develop the infrastructure to deliver those fuels.

Compliance with the RFS has recently increased costs for some refiners, according to information we reviewed and several stakeholders we contacted. While the RFS applies to all refiners in the same way, effects of rising or falling RIN prices may vary depending on each refiner's situation. For example, those refiners that have incorporated renewable fuel blending into their operations may have benefited from the rising prices relative to those refiners that are less well positioned. According to several stakeholders, RFS compliance has been most difficult for refiners with less of a retail presence, known as merchant refiners, because they do not blend their own fuel and must purchase RINs from others, increasing their cost of compliance. On the other hand, some industry participants may be relatively advantaged when the price of RINs rises. For example, an ExxonMobil official said that RIN costs did not have a significant impact on the company's financial performance during the second quarter of 2013 because ExxonMobil meets the majority of its obligation by blending its renewable fuels itself.

EPA officials told us, however, that the RFS program affects all refiners equally because obligations are the same regardless of whether refiners blend renewable fuels themselves or purchase RINs. In particular, EPA stated that refiners experience the same costs. If a company generates

[1]We have previously reported on various aspects of the blend wall and other challenges to the increased use of renewable fuels. See GAO-11-513 and GAO-09-446.

[2]The RFS requirements are "nested" in that renewable fuels other than ethanol could be used to meet the total renewable fuels requirement.

its own RINs, there is a cost associated with doing so, namely the cost for the renewable fuel compared to the petroleum fuel it displaces.

Appendix IV: Comments from the Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR - 5 2014

OFFICE OF
AIR AND RADIATION

Mr. Frank Rusco
Director
Natural Resources and Environment
U.S. Government Accountability Office
Washington, DC 20548

Dear Mr. Rusco:

Thank you for the opportunity to review and comment on GAO's draft report "Petroleum Refining: Industry's Outlook Depends on Market Changes and Key Environmental Regulations." As stated in the draft report, GAO's objectives were to examine: (1) major changes—including key environmental regulations—that have recently affected the domestic petroleum refining industry; and (2) major factors that may affect the future of the domestic petroleum refining industry—including its production, profitability, and competitiveness in foreign markets.

I am responding on behalf of the EPA, as the primary office which participated in this review is the EPA's Office of Air and Radiation. The EPA generally agrees with the report's two recommendations and findings. Below, I am providing an overview of three important clarifications on the technical findings, as well as our response to the report's recommendations. Under separate cover, I have asked staff to submit suggested modifications to the technical findings in the draft report that might provide more clarity and completeness.

RFS Compliance Costs

The report states that "…compliance costs have increased recently for some refiners…" and "according to several stakeholders, RFS compliance has been most difficult for refiners with less of a retail presence, known as merchant refiners, because they do not blend their own fuel and must purchase RINs from others, increasing their cost of compliance."

In response to the report, we assert that obligated parties under the Renewable Fuel Standard (RFS) program are experiencing the same compliance costs regardless of whether the refiner is "fully integrated," with blending capabilities, or is a "merchant" refiner that is purchasing RINs (Renewable Identification Numbers- tradable credits used for demonstrating compliance with the program). The cost of the RIN to the obligated party is equivalent to the cost of blending the renewable fuel itself. In other words, obligated parties have the choice to blend the renewable fuel themselves or essentially pay another party to blend the fuel by purchasing a RIN from them. If a company generates its own RINs, there is a cost associated with doing so, namely, the cost for the renewable fuel compared to the petroleum it displaces. Omitting this information from the report is potentially misleading.

Impact of the EPA promulgating RFS annual standards later than the statutory deadlines

The report states that "The RFS compliance period is set by statute, so delays do not change refiners' compliance dates."

In response to the report, we note that while the statute does include deadlines for the EPA to establish annual applicable volumes under the RFS program, the compliance deadline for obligated parties under the RFS program is not set in the Clean Air Act, but rather through the implementing regulations (see 40 CFR 80.1451). For example, the EPA extended the compliance deadline for the 2013 compliance year to June 30, 2014, to provide additional compliance time, and allow parties to take their 2014 obligations into consideration as they determined compliance with the 2013 standards.

Tier 3 Standards

The EPA issued the Tier 3 final rulemaking on March 3, 2014. While the final Tier 3 program is very similar to what we proposed, we made some changes to the final rule based on public input and updated analyses. In the attached comments and edits to the draft report, we have updated the report's findings to incorporate information from the final rule.

GAO Recommendations

To improve the EPA's ability to meet the annual statutory deadline for issuing annual RFS standards, GAO recommended that the Administrator of the EPA take the following two actions:

1) Assess past experience to identify the underlying causes of delays in issuing annual RFS standards.
2) Develop and implement a plan to address the causes of delays and help ensure RFS annual standards are issued on time.

EPA Response

The EPA generally agrees with GAO's recommendations. We agree that identifying the cause of delays and developing and implementing a plan to address the delays may help to ensure that the annual RFS volume standards are issued on time. The EPA strives to issue the RFS standards according to the statutory deadlines, and we are continually seeking the best approaches to achieve that goal.

As GAO is aware, the Agency has a comprehensive process, known as the *Action Development Process* (ADP), for developing regulations. To monitor progress and ensure quality, the ADP employs numerous development milestones during the preparation of proposed and final regulations. The ADP is utilized internally by management to ensure that projected milestones are achieved, and some of the milestones are also made available to the public on the EPA's website (http://yosemite.epa.gov/opei/RuleGate.nsf/). As we respond to GAO's recommendations and try to reduce the delay in issuing the annual standards, the EPA will consider whether the ADP milestones are being utilized and managed appropriately.

As GAO states, the RFS touches a range of complex environmental, energy, and agricultural issues, and the need for interagency review and public comment adds to the timelines for issuing such standards.

The EPA is currently considering how to improve our internal regulatory review processes in order to meet established deadlines. The first step in this process will be to identify the causes of delays, and then develop a corrective plan to address them. The EPA will also be engaging our interagency partners, including OMB, during the course of this process to identify any areas that could be streamlined for a more efficient and timely review.

Thank you again for the opportunity to review and respond to the draft report. If you have any questions or require further information, please contact Venu Ghanta at (202) 564-1374.

Sincerely,

Janet G. McCabe
Acting Assistant Administrator

Enclosure
1. EPA edits and comments to GAO's draft report

Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

Frank Rusco, (202) 512-3841 or ruscof@gao.gov

Staff Acknowledgments

In addition to the individual named above, Christine Kehr (Assistant Director), Elizabeth Beardsley, Catherine Bombico, Keya Chateauneuf, Nirmal Chaudhary, Quindi Franco, Cindy Gilbert, Katharine Kairys, Michael Kendix, Armetha Liles, and Alison O'Neill made key contributions to this report.

Related GAO Products

Oil and Gas: Information on Shale Resources, Development, and Environmental and Public Health Risks. GAO-12-732. Washington, D.C.: September 5, 2012.

Biofuels: Challenges to the Transportation, Sale, and Use of Intermediate Ethanol Blends. GAO-11-513. Washington, D.C.: June 3, 2011.

Vehicle Fuel Economy: NHTSA and EPA's Partnership for Setting Fuel Economy and Greenhouse Gas Emissions Standards Improved Analysis and Should Be Maintained. GAO-10-336. Washington, D.C.: February 25, 2010.

Energy-Water Nexus: Many Uncertainties Remain about National and Regional Effects of Increased Biofuel Production on Water Resources. GAO-10-116. Washington, D.C.: November 30, 2009.

Energy Markets: Estimates of the Effects of Mergers and Market Concentration on Wholesale Gasoline Prices. GAO-09-659. Washington, D.C.: June 12, 2009.

Biofuels: Potential Effects and Challenges of Required Increases in Production and Use. GAO-09-446. Washington, D.C.: August 25, 2009.

Federal Rulemaking: Improvements Needed to Monitoring and Evaluation of Rules Development as Well as to the Transparency of OMB Regulatory Reviews. GAO-09-205. Washington, D.C.: April 20, 2009.

Energy Markets: Refinery Outages Can Impact Petroleum Product Prices, but No Federal Requirements to Report Outages Exist. GAO-09-87. Washington, D.C.: October 7, 2008.

Energy Markets: Increasing Globalization of Petroleum Products Markets, Tightening Refining Demand and Supply Balance, and Other Trends Have Implications for U.S. Energy Supply, Prices, and Price Volatility. GAO-08-14. Washington, D.C.: December 20, 2007.

Vehicle Fuel Economy: Reforming Fuel Economy Standards Could Help Reduce Oil Consumption by Cars and Light Trucks, and Other Options Could Complement These Standards. GAO-07-921. Washington, D.C.: August 2, 2007.

Motor Fuels: Understanding the Factors That Influence the Retail Price of Gasoline. GAO-05-525SP. Washington, D.C.: May 2, 2005.

GAO's Mission	The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.
Obtaining Copies of GAO Reports and Testimony	The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's website (http://www.gao.gov). Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to http://www.gao.gov and select "E-mail Updates."
Order by Phone	The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, http://www.gao.gov/ordering.htm. Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537. Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.
Connect with GAO	Connect with GAO on Facebook, Flickr, Twitter, and YouTube. Subscribe to our RSS Feeds or E-mail Updates. Listen to our Podcasts. Visit GAO on the web at www.gao.gov.
To Report Fraud, Waste, and Abuse in Federal Programs	Contact: Website: http://www.gao.gov/fraudnet/fraudnet.htm E-mail: fraudnet@gao.gov Automated answering system: (800) 424-5454 or (202) 512-7470
Congressional Relations	Katherine Siggerud, Managing Director, siggerudk@gao.gov, (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548
Public Affairs	Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800 U.S. Government Accountability Office, 441 G Street NW, Room 7149 Washington, DC 20548

Please Print on Recycled Paper.

Message

From: Sutton, Tia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=25E87403F63143ACBB959446512A372C-SUTTON, TIA]
Sent: 1/22/2016 2:31:02 PM
To: Hengst, Benjamin [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c414e2bf04a246bb987d88498eefff06-Hengst, Benjamin]; Argyropoulos, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0149b93d2780437a9c2b6d8477df7991-pargyrop]; Machiele, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b71a67c326714ebbaa72eda552e55282-Machiele, Paul]; Orlin, David [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=aa64dad518d64c5f9801eb9bb15b7ec3-DORLIN]; Dubois, Roland [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=835458b87b574ccbb1704415df8413d1-RDUBOIS]; Niebling, William [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8fb45c85622f4be5a2f0ce12a9798204-Niebling, W]; Haman, Patricia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0ebb27cd881d41b19a30a491dc3f3f57-phaman]; Simon, Karl [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=4d781d1ad595415db3a4e768c2d2b3fc-Simon, Karl]; Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]; Le, Madison [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9297d8b52bcb41319ba40d11142ab307-Le, Madison]; Cohen, Janet [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d94b854e69cd4f9e80db946bf9d1c1b2-Cohen, Janet]; Manners, Mary [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ebdb1392504a4b71894970b1a7bb186c-Manners, Mary]; Weihrauch, John [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=74d426b7439045d9a0a65b186ea68b21-Jweihrau]; Anderson, Robert [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=741befd619d44578be1399b296c7c04a-RAnder02]; Monger, Jon [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=34a81578651b4f0fbba3afbb313baef7-Monger, Jon]
Subject: Materials for 10am hearing prep session
Attachments: 2g. Small Refinery Hardship- Jan 2016 Updates.docx; 2h. Small Refinery Petitions & DOE language.docx; 2i. E15-Sensenbrenner QA.docx; E15_from QA set #2.docx; RIN fraud + QAP from QA set #2.docx

All,
Materials for the hearing prep session are attached, I will bring copies for those in DC. These items pertain to the highlighted agenda items below. (Please note that the E15 one-pager and the RIN fraud/QAP one-pager are taken from Q&A set #2)

RFS Hearing
1/27/16, 9am
Committee on Oversight and Government Reform, U.S. House of Representatives

Agenda for 1/22/16 Prep Session

1. ~~Remaining items from 1/21 Weekly Fuels~~
   - ~~AltEn – Waste Seed Decision~~
   - ~~Update: Registration of Grandfathered Facilities~~

2. OCIR update

3. Materials update

4. Small refinery hardship

5. E15 (warranties, small engine issues)

6. Sensenbrenner issue

7. RIN fraud/QAP update

8. Agenda for your prep session next Monday
    - Mock hearing

Renewable Fuel Standard
Small Refinery Hardship Program
Suggestions for Streamlining the Petition Process

I. General Changes to the Hardship Petition Process

1. Streamline the Petition Process

The petition process is burdensome for petitioning small refineries, EPA and DOE. To ease the burden on all parties, the small refiners suggest that EPA and DOE streamline the petition process by withdrawing the agency's December 6, 2016 memorandum requiring small refinery petitioners to submit voluminous amounts of financial and other data in favor of the streamlined process that DOE previously used.[1] Small Refineries should be required to complete and submit the DOE survey form in accordance with its definitions and instructions, the RFS compliance costs spreadsheet, and a petition containing information not covered by the DOE survey or RFS cost spreadsheet.

2. Score all of the DOE Metrics

In 2011, DOE determined that it did not then have adequate data to score three of the metrics described in the DOE Small Refinery Exemption Study ("DOE Study"). The metrics for local market acceptance of renewable fuels (metric 1.c.) and renewable fuel blending (% of production) (metric 2.b.), were to be applied "in the future when other renewable fuels [became] commercially available."[2] E85, biodiesel, and advanced biofuels are all commercially available, enabling DOE to score these metrics. The metric measuring whether RINs are a net revenue or cost was not scored in 2011 "due to a lack of consistency among [petitioners]."[3] Since 2013, petitioners have been required to submit RFS compliance cost spreadsheets with their petitions, which has given EPA consistent data among petitioners for purposes of evaluating whether RINs are a net revenue or cost.

Therefore, the reasons for not scoring these metrics in 2011 are no longer valid and they should be scored going forward. If DOE thinks the data necessary to evaluate these metrics is not available or reliable, the metrics should not be scored at all.

3. Use Objective Criteria

To ensure consistent and fair application of the hardship standard to all small refineries, and to streamline the petition process, EPA should use objective criteria when applying the DOE metrics. Using objective criteria will give small refineries certainty of their RFS obligations which will allow them to make important operational decisions. *See* Section II for a discussion of the DOE metrics.

---

[1] U.S. EPA, FINANCIAL AND OTHER INFORMATION TO BE SUBMITTED WITH 2016 RFS SMALL REFINERY HARDSHIP EXEMPTION REQUESTS (Dec. 6, 2016), available at: https://www.epa.gov/sites/production/files/2016-12/documents/rfs-small-refinery-2016-12-06.pdf.
[2] DOE Study at 33.
[3] DOE Study at 35.

4. Do Not Adopt Scoring Under the DOE Addendum

In March of 2014, DOE issued an addendum to the DOE Study, making hardship relief more difficult to secure. The DOE addendum is inconsistent with Congressional intent that small refineries not bear a disproportionate regulatory burden and should not be applied. For the reasons described above, EPA should reject DOE's scoring based on the 2014 addendum to the DOE Study; "any impact on efficiency gains" (metric 3.a.) and "any individual special event" (metric 3.b.) warrant a score of "10."

5. Use of Independent Contractors

To the extent that DOE and EPA rely on contractors to evaluate small refinery hardship petitions, the agencies should rely only on contractors that are neutral, independent parties that do not have an interest in the outcome of the petition. DOE and EPA should also instruct any contractors that they rely on to evaluate small refinery hardship petitions consistent with the DOE Study and the additional information provided in this document. This will help ensure that the agencies receive and are able to impartially and accurately assess all small refinery hardship petitions.

6. Issue Timely Decisions

The regulations require EPA to act on small refinery hardship petitions within 90 days. This deadline will be easier to achieve if the petition process is streamlined and the agency applies objective criteria, which will also reduce the burden in preparing lengthy decision documents. Simplifying the process will also enable small refineries to submit their petitions earlier in the year. The complexity of the process and volume of data required to be submitted with the petition results in petitions being submitted later in the compliance year.

7. Give Petitioners An Opportunity to Meet Prior to the Denial of a Petition

Final decision documents are not always accurate, leading to costly appeals. Prior to denying a hardship petition, EPA should offer the petitioner an informal opportunity to meet to discuss the basis for the intent to deny.

II. DOE Scoring Metrics

1. Disproportionate Structural Impact Metrics

a. *Metric 1.a. Access to Capital/Credit (DOE Survey Form Lines 3.15 – 3.17)*

The DOE survey form, lines 3.15 to 3.17, ask for the small refinery's credit rating and debt to equity ratio, which matches scoring metric 1.a. DOE/EPA should rely on this objective criteria to score metric 1.a., and not require the production of loan covenants, financial statements, and other financial information to do a more expansive analysis of the company's access to capital. This will streamline the petition process and assure consistent application among petitioners.

Score	Description
0	Good access (BB- or above credit rating)
5	Moderate access (rating in Bs)
10	Poor access (C rating or 50% D/E)

b. *1.b. Other Business Lines Besides Refining and Marketing*

DOE's metric 1.b. is intended to measure whether small refineries have other business lines *besides refining and marketing*. DOE has scored refineries that produce refined petroleum products other than transportation fuels as having "other business lines," while at the same time including non-transportation fuels in the measure of "net refining margins" (metric 2.a.). This approach is internally inconsistent because "refining" cannot mean two different things in two metrics using the same term.

The DOE survey form instructions state that all definitions are to be construed as "consistent with" the Energy Information Administration's ("EIA's") Form EI-810, "Monthly Refinery Report"; EIA-815, "Monthly Bulk Terminal and Blender Report"; and EI-28, "Financial Reporting System"; and other forms as appropriate. Each of the sources consistently treats refining as the production of all refined petroleum products including lubricants and asphalt. EIA defines "Refinery" and "Petroleum Products" as:

> ***Refinery.*** An installation that manufactures finished **petroleum products** from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and oxygenates.
>
> ***Petroleum Products.*** Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.[4]

[4] *Petroleum & Other Liquids, Definitions, Sources and Explanatory Notes*, U.S. Energy Information Administration, https://www.eia.gov/dnav/pet/TblDefs/pet_cons_psup_tbldef2.asp (last visited Aug. 22, 2017) (emphasis added).

EIA also defines "Refining" as:

> After crude oil is removed from the ground, it is sent to a refinery where different parts of the crude oil are separated into useable petroleum products. These petroleum products include gasoline, distillates such as diesel fuel and heating oil, jet fuel, petrochemical feedstocks, waxes, lubricating oils, and asphalt.[5]

EPA's definition of refining is the same as EIA's, producing a range of petroleum products including non-transportation fuels.[6]

Treating the production of lubricants, asphalt, and other non-transportation fuels as "other business lines" also is inconsistent with the purpose of this metric as described in the DOE Study, which was to evaluate whether a refinery has "other lines of business" that are less correlated with refining. The example used by DOE was upstream exploration and development. The DOE Study was trying to assess the degree to which these separate, non-refining operations would make a small refinery less vulnerable to the volatility in "refining margins," not whether a refinery produced products other than transportation fuels.[7]

If DOE treats refined petroleum products other than transportation fuel as "other business lines," then it should exclude everything but transportation fuels from net "refining" margins in metric 2.a. because refining cannot mean two different things in two metrics using the same term.

Score	Description
0	Other lines
10	No other lines

c. *1.c. Local Market Acceptance of Renewable Fuels*

In scoring whether there is "local market acceptance of renewable fuels," DOE only considers E10, and not E85 and biodiesel, although the metric contemplates one score that captures market acceptance of all three "products" and requires a score of "10" if any product (singular) is not accepted.

The DOE Study indicated that there was no scoring for E85 and biodiesel due to a "lack of data." The EIA publishes detailed data each year on the volume of E85 used and the number of vehicles capable of accommodating it. DOE maintains an "alternative fuels data center" that tracks the number and location of all E85 fueling stations across the United States, and EPA's 2014-2016 final RFS rule acknowledged that a number of market constraints, including that "blenders and distributors [will need to see] sustained profit opportunities before they are willing to invest in new infrastructure to increase their capacity to blend and distribute renewable fuels." 80 Fed. Reg. 77,420, 77,459 (Dec. 14, 2015). In addition, small refinery hardship petitioners

---

[5] *Oil: Crude and Petroleum Products Explained*, U.S. ENERGY INFORMATION ADMINISTRATION, https://www.eia.gov/energyexplained/print.cfm?page=oil_home (last visited Aug. 11, 2017).
[6] *Types of Refined Petroleum Products*, U.S. ENVIRONMENTAL PROTECTION AGENCY, https://www.epa.gov/emergency-response/types-refined-petroleum-products (last visited Sept. 7, 2017).
[7] DOE Study at 34.

describe constraints in their local markets on the sale of E85 and large retail chain owners admit that they are "fuel agnostic" and unwilling to offer fuels that their customers are not inclined to buy.[8] Finally, a report for Growth Energy, a trade association representing the ethanol industry, acknowledges the market constraint on E85 and concludes that greater E85 penetration will not occur until RINs trade at $2-3/RIN at which point "blenders [will] face stronger incentives to reduce E85 prices (i.e., reduce their margins) in order to drive needed volumes."[9] All of these data points indicate that there is voluminous data about local market resistance to E85 use to enable DOE to score this metric.

In addition, DOE should be scoring local market resistance to biodiesel blending. Small refineries disproportionately produce diesel; diesel is blended at lower rates than gasoline; and fewer RINs are generated from blending biodiesel. Therefore, not scoring local market acceptance of biodiesel skews the scoring against granting small refinery hardship. There are very significant obstacles to biodiesel blending, some of which are specific to small refineries. For example, a small refinery will not be able to sell blended biodiesel in a market where the large integrated refiner has chosen not to do so. Large integrated refiners pick and choose in which markets they blend based on geography (warmer climates), proximity to biodiesel production, transportation costs, etc. A small refinery will not be able to sell blended biodiesel where the largest market player, with its lower overall cost structure, chooses not to do so. This is why state biodiesel blending mandates help small refineries compete against larger, vertically-integrated refiners (unless their customer base is exempt from the mandate). However, many states do not have biodiesel blending mandates.

In addition, large truck stop chains and convenience stores like Kwik Trip, Love's (Musket), and Pilot have displaced small refineries' ability to blend biodiesel. Due to the grossly inflated value of the RIN, large truck stop chains and convenience stores that are not obligated parties under the RFS program refuse to buy blended biodiesel from small refineries or cap the amount of blended biodiesel that they will accept in order to capture the RIN value themselves. Small refineries that have made investments to add biodiesel blending have seen their investments displaced by large truck stop chains and convenience stores.

Biodiesel is not accepted in all markets and is not amenable for use in all markets. EIA and DOE track biodiesel volumes and retail outlets where it is sold. EPA evaluated market constraints on biodiesel blending in its 2014-2016 rulemaking, and small refinery hardship petitioners describe in their petitions the local market acceptance of biodiesel and market constraints on more biodiesel blending in their markets. Therefore, DOE has ample data with which to determine whether there are market constraints on biodiesel blending to enable DOE to score this metric.

A score of "0" for this metric only reflects local market acceptance of E10, but the metric was intended to score the local market acceptance of all three products – E10, E85, and biodiesel. If DOE does not think the data is available or reliable to evaluate all three products,

---

[8] Letter from David Masuret and Matthew Durand, Cumberland Farms, Inc. to Gina McCarthy, Administrator, EPA (Nov. 2, 2016) (EPA Docket ID No. EPA-HQ-OAR-2016-0544-0055).

[9] MARC CHUPKA, J. MICHAEL HAGERTY, NICHOLAS POWERS & SARAH GERMAIN, THE BRATTLE GROUP, PEEKING OVER THE BLENDWALL: AN ANALYSIS OF THE PROPOSED 2017 RENEWABLE VOLUME OBLIGATIONS at 15 (July 11, 2016).

then it should not score this metric at all. Scoring the metric based solely on E10 acceptance is inaccurate because the metric was intended to measure local market of all three renewable fuels, and ignoring E85 and biodiesel hides the small refinery hardship caused by overwhelming evidence that there is substantial local market resistance to E85 and biodiesel that uniquely harms small refineries.

	Score	Description
c. Local market acceptance of Renewables	0 10	Products accepted Product not accepted
i. E10	0 5 10	High acceptance Low acceptance No acceptance
ii. E85	Not scored because of small E85 volumes	
iii. Biodiesel	Not available	

d. *1.d. Percentage of Diesel Production (DOE Survey Form Line 4.12, 4.13)*

Evaluation of this metric should be based on industry average diesel production and not the 2011 industry average of 32%. The DOE scoring metric description (below) uses "Industry Average" rather than 32%, indicating its intent that the current industry average, and not the average in 2011, should be applied. In 2015, 2016, and 2017, the industry average diesel production as reported by EPA in the annual RFS rulemakings was much lower than the 2011 average – 29%, 30%, and 28% – respectively. EPA should use the industry average in the most recent compliance year for purposes of scoring this metric.

Score	Description
0	D/(G+D) < Industry Avg.
5	D/(G+D) > Ind. Avg. < 40%
10	D/(G+D) > 40%

e. *1.e. Subject to Exceptional State Regulations (DOE Survey Form Line 4.16)*

DOE has been too narrow in construing what constitutes an exceptional state regulation. For example, state biofuel blending mandates generally help small refineries because they force large integrated refiners, that ordinarily pick and choose in which markets they blend based on favorable market conditions, to blend in all markets with state mandates. Small refineries cannot sell blended fuel when competing with large integrated refiners offering unblended fuel. However, when the small refinery's customers are exempt from the state biofuel blending mandate, state biofuel mandates have just the opposite effect – the state biodiesel mandate benefits others, but not the small refinery. In this situation, the small refinery should receive a score of "5," some barriers for compliance, per the chart below.

DOE's description of this metric indicates that it is trying to identify state laws that create obstacles to blending for the individual refinery, forcing the small refinery to buy RINs or generate RINs but give away the RIN value in order to achieve compliance. Therefore, in scoring this metric, DOE/EPA should be more expansive in considering whether the state law creates obstacles to blending for the small refinery.

Score	Description
0	Not subject
5	Some barriers for compliance
10	Subject to exceptional state regulations

f. *2.a. Relative Refining Margin Measure (DOE Survey Form Line 3.7)*

EPA has instructed small refineries to exclude taxes, depreciation, and finance charges (interest) from their net refining margin calculation. This contradicts the definition in DOE's survey instructions, which states:

> **Net Refinery Margin (dollars per barrel) (3.7) Report** the difference between the gross refining margin and the costs of producing and selling the petroleum products (e.g., refining energy costs and selling costs). The net margin measures before-tax cash earnings from the production and sale of refined products. The net margin excludes peripheral activities such as non-petroleum product sales at convenience stores.[10]

Small refineries' net refining margins should be based on the DOE survey instructions. "Before-tax cash earnings" takes into account the company's finance charges (interest), but EPA has instructed refiners to exclude interest.

In calculating the industry average net refining margins against which small refinery margins are compared for purposes of scoring this metric, DOE is required to factor in the RIN revenues from integrated refiners' affiliated marketing arms, which is where their windfall RIN revenues are reflected. According to the DOE survey instructions, the net refining margin includes "the production and sale of refined products" and only excludes "non-petroleum product sales at convenience stores," indicating that the net refining margin carries all the way to retail, which is consistent with the DOE's evaluation of "of other business lines besides refining **and marketing**."

Therefore, if a large integrated refinery has an affiliated retail chain/marketing arm, its net refining margin must include the margins from its retail operations to capture its windfall RIN revenues. By way of example, to avoid the extreme competitive disadvantage for refineries that do not own retail, Marathon bought the Speedway retail chain. Marathon reported that "synergies across the network" contributed to its exceptional performance and record earnings in 2016:

> Speedway continued its exceptional performance in the quarter and set multiple records for the full-year 2016 while maintaining tight control on expenses. Speedway surpassed segment all-time highs in income from operations, light product gallons sold, merchandise sales, and merchandise gross margin on a percentage and absolute dollar basis. Speedway continues to exceed our expectations by driving marketing-

[10] U.S. DEPT. OF ENERGY, RFS2 SMALL REFINERY SURVEY 2010, INSTRUCTIONS (May 2010), available at: *https://www.reginfo.gov/public/do/DownloadDocument?objectID=17799501.*

enhancement opportunities and continuing to realize acquisition synergies across the network.[11]

Windfall profits from selling RINs are reflected in the marketing arms of large integrated refining companies and, according to DOE's survey instructions, must be captured in calculating the net refining margin for the industry.

Each year DOE determines the industry-wide net refining margin, but it's not clear how they do so. EPA notes that "DOE calculates three-year average industry refining gross and net margins…based on public data." It is not clear, however, how that calculation is done and the information that the agency relies on in performing the calculation is not made public to small refinery petitioners. In particular, it is not clear that profits from marketing or "synergies across the network" have been included or that the production and sale of all types of refined petroleum products have been accounted for. Therefore, there should be greater transparency in how the net refining margin is calculated.

Net refining margins should be reported on the DOE survey (line 3.7) consistent with the definitions in the DOE survey instructions, and the industry-wide refining margins against which small refineries are compared should include affiliated marketing businesses and the production and sale of all types of refined petroleum products.

Score	Description
0	Above the 3-year industry average
5	Positive, and below 3-year industry average
10	Negative

g. *2.b. Renewable Fuel Blending (% of production) (RFS Compliance Cost Spreadsheet)*

The DOE Study explains that the degree to which a small refinery can blend its production with renewable fuel is a large component of assessing small refinery hardship; yet, this metric has never been scored for biodiesel and other advanced biofuel blending. All small refineries that petition for hardship relief submit the RFS compliance costs spreadsheet that includes the amount of renewable fuel blending in each of these categories. The RFS compliance cost spreadsheet was developed by DOE/EPA in 2013, and all hardship petitioners are required to submit it with their petition in order for their petition to be deemed complete. Therefore, DOE has had the data it needs to score this metric since at least 2013 and, by not scoring this metric, has underestimated the harm to small refineries.

Like metric 1.c., DOE scoring metric 2.b. is based on ethanol blending alone. Ethanol is the fuel that is most readily accepted for blending. Scoring this metric as a "0," without accounting for the lack of blending in the other fuels categories underestimates small refinery hardship. This is particularly true because small refineries disproportionately produce diesel. If

[11] *Marathon Petroleum Corporation Reports Fourth-Quarter and Full-Year 2016 Results*, MARATHON PETROLEUM CORP., http://ir.marathonpetroleum.com/phoenix.zhtml?c=246631&p=irol-newsArticle&ID=2241160 (last visited Aug. 22, 2017) (internal quotations omitted).

DOE does not score the other categories of renewable fuel blending, it should not score this metric at all.

Score	Description
Ethanol blending	
0	75%+
5	25-74%
10	<25%
Biodiesel blending (not used)	
0	1.1% of diesel production
10	<1.1%
Other Advanced Biofuel blending (not used)	
0	Some blending
10	No blending

h. *2.c. In A Niche Market*

The DOE Study rationale for characterizing a small refinery as a "niche" refinery based on its production of specialty products is that specialty products have higher refining margins. Because DOE requires that refineries include all refined petroleum products in their calculation of "net refining margins," any higher margins from specialty product sales are already reflected (counted against) small refineries in metric 2.a. In addition, DOE treats specialty products as "other business lines" in metric 1.b., stacking the deck against small refineries that produce specialty products.

In addition, small refineries suspect that the industry average net refining margins calculated by DOE do not include specialty products, resulting in a lower industry average net refining margin, even though small refineries that produce specialty products are compared against the industry average refining margins and receive a score of "0" for this metrics.

Therefore, DOE should exclude "specialty products" from "net refining margins" (metric 2.a.) or, if they are included in net refining margins, refineries should not be characterized as "niche" under metric 2.c., or as having "other business lines" under 1.b., to be internally consistent and avoid stacking the deck.

Score	Description
0	Niche
5	Moderate niche impact
10	No niche

i. *2.d. RINs Net Revenue Or Cost (RFS Compliance Cost Spreadsheet)*

The DOE Study explains that complying with RFS can be a net cost to refineries that purchase RINs to comply and can generate revenue for refineries that comply by blending. DOE explained that it did not score this metric in the 2011 study "due to lack of consistency among survey participants." As described above, in 2013, DOE/EPA developed the "RFS Compliance

Cost" spreadsheet, which provides consistent data from petitioners on RFS compliance costs. As a result, DOE has the data necessary to score this metric and this metric should be scored.

EPA should make one change to its instructions for completing the RFS Compliance Cost Spreadsheet to accurately capture small refinery compliance costs. As the Coalition has explained to EPA, it has become an increasingly common practice for distributors to buy blended fuel from small refineries only if the small refinery agrees to disgorge a significant portion of the RIN value (i.e., the opposite of RIN cost pass-though). In other words, due to their lack of market power, small refineries that blend renewable fuel are forced to give away RIN value to capture the sale. Small refineries also are forced to discount the sales price of their fuels to compete with RIN-long refiners that use their excess RIN sales to discount the sales prices of the petroleum fuels they sell and undercut their small refinery competitors.

EPA should make clear in its instructions that small refineries should include these RIN stealing discounts in the RFS Compliance Cost Spreadsheet. The small refineries have provided EPA with contracts showing, for example, that the price for blended fuel is the spot price less 70-90% of the RIN value, depending on the customer. This is now a common practice in the industry and uniquely harms refineries that do not own retail and are forced to sell their products to distributors. The RFS Compliance Cost spreadsheet needs to capture the hardship to small blending refineries that cannot retain the RIN value and are effectively buying RINs even though they generate RINs through blending.

Further, DOE and EPA should recognize that small refineries are not able to pass-through or "recover" their RFS costs in the sales price of the fuels they produce. As explained in the DOE Study:

> The degree to which the costs burdening small refineries will be passed through to the market depends on many factors, including the market power and the relative cost level of a small refiner relative to other market participants.

DOE Study at 22-23. Because small refineries have very limited market power and have costs proportionally higher than their market competitors, small refineries are not able to pass through their RFS costs. The "RIN stealing" described above is further evidence of small refineries' inability to pass through their RFS costs.

Score	Description
0	revenue > cost
10	revenue < cost

2. Viability Metrics

The viability metrics measure "the ability of the refiner [] to remain competitive and profitable." A small refinery cannot remain competitive when it bears a disproportionate

regulatory burden and competes with multi-national super majors with full integration and economies of scale.[12]

Appendix B-5 to the DOE Study explains the extreme, permanent, competitive advantage large integrated oil companies enjoy over small refineries in a high-priced RIN market. While DOE predicted that small refineries would be harmed significantly by high RIN prices when the blendwall was reached, it did not anticipate that RINs would trade at ten times their intrinsic value:

> RIN prices should rise to reflect the most expensive blending opportunity taken. As the RFS mandate increases, obligated parties will demand more RINs, adding upward price pressure. As the mandate increases, increasing the supply of RINs becomes difficult or nearly impossible. In anticipation of the blend wall, obligated parties may stockpile RINs through discretionary blending in anticipation of a shortage of blending opportunities. Those parties that are short, i.e. cannot generate enough RINs through their own facilities to meet their RVO, will need to purchase RINs and could suffer significant economic hardship.[13]

The DOE Study concluded that when the blendwall was reached, RIN prices would reflect the most expensive blending opportunity. The fact that they are trading at ten times their intrinsic value means that the harm to small refineries is more acute than DOE ever anticipated.

The extreme competitive disadvantage for small refineries caused by the current rule structure is aptly described in Appendix B-5, but several market shifts have occurred that DOE did not predict. First, DOE did not predict that RINs would trade at ten times the cost of blending. Second, the DOE Study also did not predict RIN value stealing – downstream distributors/retailers forcing small refineries to disgorge RIN value to secure the sale because they lack market power to retain the full value of the RIN. Third, DOE did not predict that even if small refineries were able to make investments in renewable fuel blending to avoid the high cost of RINs, those investments could be displaced by unobligated blenders (e.g., Kwik Trip setting up a competing blending operations to displace the small refiners blending operation). Finally, DOE did not predict the market manipulation and fraud in the RIN market that has caused wild volatility, higher prices, and fraud costing taxpayers over a billion dollars.

The harm to small refineries became acute in 2013 when RIN prices increased by 5000%, which is when DOE adopted the addendum to the DOE Study, raising the bar for securing hardship relief. The addendum should be abandoned to avoid greater harm to small refineries.

a. *3.a. Compliance Costs Eliminates Efficiency Gains (impairment)*

The DOE Study recognized that small refineries could suffer a disproportionate economic hardship under the RFS program if buying RINs is more expensive than RINs that can be generated through blending.[14] The harm is both the cost of RINs and the competitive advantage high RIN values bestow on large integrated refiners that achieve compliance through blending

[12] DOE Study at 23.
[13] DOE Study at 17-18.
[14] DOE Study at 2.

and generate and sell excess RINs. As RIN prices have increased from 2-3 cents per RIN in 2010 to close to nearly $1.00 per RIN today, the competitive distortion in favor of large integrated refiners has become extreme.

In numerous decision documents, EPA acknowledged that it was denying hardship relief to small refineries notwithstanding its conclusion that doing so would prevent the refinery from making investments to improve efficiency, reliability, and safety:

> The cost of RFS compliance, either through purchasing and blending renewable fuels, or purchasing RINs, or a combination of both, may reduce funds available to pay for other potential projects to improve the efficiency, reliability, and safety of a refinery, but that fact does not establish entitlement to an exemption.

As the 10th Circuit just concluded in *Sinclair*, Congress did not intend for the RFS to prevent small refineries from investing in efficiency, reliability, and safety projects in order to pay for RINs.[15]

As DOE predicted, high RIN prices are causing a disproportionate economic impact on small refineries. This disproportionate economic impact, by its very nature, is reducing small refineries' profitability relative to their large integrated refining competitors that generate excess RINs through blending, and the reduction in relative profitability is impairing the small refineries' ability to invest in future efficiency improvements. As DOE noted, significant constraints on efficiency improvements eventually will leave small refineries at risk, which is all that is required to demonstrate an impact on efficiency gains.

In the past, EPA has denied small refinery hardship petitions, stating in decision documents that small refineries must shoulder their share of the RFS compliance burden.

> EPA has considered the language in the recent explanatory statement for the 2016 Consolidated Appropriations Act which states: 'The Secretary [of DOE] is reminded that the RFS program may impose a disproportionate economic hardship on a small refinery even if the refinery makes enough profit to cover the cost of complying with the program.' Thus, in 2012, the statutory presumption was that in 2013 and future years, [refinery] would shoulder its share of responsibility for the compliance burden borne by obligated parties under the RFS program, unless it could show 'disproportionate economic hardship.'

Small refineries do not mind shouldering their share of any compliance burden, but that is not what is happening under the RFS. The RIN market is no longer a compliance market; it has become a market that is highly susceptible to manipulation, speculation, and fraud. Vertically-integrated refineries that avoid the RIN market or benefit from it because they have excess RINs or are sophisticated enough to have a RIN trading desk and buy and sell RINs for profit at the expense of small refineries. Small refineries that are paying ten times the intrinsic value of a RIN to a RIN-long integrated oil company, an exempt (non-refining) blender like Murphy USA

[15] *Sinclair Wyoming Refining, et al. v. EPA*, Case No. 16-9532 (10th Cir. 2017).

or Kwik Trip, or multi-national commodity trader with links to Russia, are shouldering more than their share of the compliance burden.

As DOE predicted, small refineries owned by large integrated oil companies are not suffering from the same competitive distortion because they have access to RINs from their affiliated marketing arms, but all other small refineries, blending and non-blending, are harmed by the current market conditions and should receive a score of "10."

Score	Description
0	No impact on efficiency
5	Moderate impact on efficiency
10	Impact on efficiency

b. *3.b. Individual Special Events*

The DOE Study recognizes that certain events can have a temporary negative impact on a refinery's ability to comply with the RFS. In the past, EPA and DOE have taken an unreasonably narrow view of what qualifies as an "individual special event." EPA and DOE should find that pipeline shutdowns, extended refinery turnarounds, unplanned outages, and key unit shutdowns that have a temporary negative impact on a refinery's ability to comply with the RFS should be considered "individual special events."

Score	Description
0	No special events
5	Moderate event
10	Special event impacting viability

c. *3.c. Compliance Costs Likely To Lead to Shutdown*

The DOE Study recognized that some refineries have a unique vulnerability, such as a weak competitive position, and any significant additional burden could cause bankruptcy or closure. This metric measures whether a small refinery may face compliance costs that would significantly impact the operation of the facility, leading eventually to an inability to increase efficiency to remain competitive, eventually resulting in closure. Over the past several years, small refineries have shut down and others have been acquired. In addition, to consider bankruptcy or closure, DOE/EPA should consider the necessity of the sale of the asset because the small refinery can no longer afford to operate it.

A refinery does not need to be on the verge of shutdown to receive a "10" on this metric.

Score	Description
0	Not likely to shut down
10	Likely to shut down

Message

From: Manners, Mary [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=EBDB1392504A4B71894970B1A7BB186C-MANNERS, MARY]
Sent: 5/29/2014 10:49:58 AM
To: Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]
Subject: Re: small refinery exemption summary

I'm checking. Do you know the source of the bullets in Venu's msg below? Also, did you see the 1-pager I sent you separately? Is that not what you're looking for (maybe not since I didn't reference the original number from the study)? Thx.

From: Bunker, Byron
Sent: Thursday, May 29, 2014 6:21:33 AM
To: Manners, Mary
Subject: Fw: small refinery exemption summary

Hi Mary,

Deliberative Process / Ex. 5

Sent from my BlackBerry 10 smartphone.

From: Grundler, Christopher
Sent: Wednesday, May 28, 2014 11:39 PM
To: Bunker, Byron; Manners, Mary; Haley, Mike
Subject: Re: small refinery exemption summary

Deliberative Process / Ex. 5

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. Environmental Protection Agency
202.564.1682 (DC)
734.214.4207 (Ann Arbor)
www.epa.gov/otaq

From: Bunker, Byron
Sent: Wednesday, May 28, 2014 10:33 PM
To: Grundler, Christopher
Subject: Fw: small refinery exemption summary

Sent from my BlackBerry 10 smartphone.

From: Manners, Mary
Sent: Wednesday, May 28, 2014 9:20 PM
To: Bunker, Byron
Cc: Weihrauch, John
Subject: Fw: small refinery exemption summary

I got this from Venu and am forwarding to you FYI. I'll try to turn this into something useful for Chris. Do you know what time the Simpson brief is?

From: Ghanta, Venu
Sent: Wednesday, May 28, 2014 8:28:03 PM
To: Manners, Mary
Subject: FW: small refinery exemption summary

Please see attached and I've pasted a smattering of the different blurbs that we have used on this topic below.

Deliberative Process / Ex. 5

Deliberative Process / Ex. 5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

August 1, 2018

OFFICE OF
AIR AND RADIATION

The Honorable Charles E. Grassley
United States Senate
Washington, D.C. 20510

Dear Senator Grassley:

During Acting Administrator Wheeler's first week, EPA sent you a response to an initial April 12, 2018, letter from you and 11 of your colleagues regarding the small refinery exemption (SRE) program under the Renewable Fuel Standard (RFS). The Acting Administrator asked that I follow up to provide additional detail.

Acting Administration Wheeler and I understand your concern and frustration with the administration of the SRE program. It appears that your concern is rooted, in large measure, in a lack of transparency, which the Acting Administrator has directed me to address.

As an initial step towards that goal, the Office of Air and Radiation plans to develop a Transparency Dashboard that will provide regularly updated information regarding the number of small refinery petitions received and the status of these petitions. The Transparency Dashboard will also convey the total number of exempted gallons and the number of impacted Renewable Identification Numbers (RINs). This will ensure equal access to important market data while improving the overall transparency of the RFS program.

While transparency is an explicit priority, EPA is required to comply with the Confidential Business Information (CBI) regulations laid out in 40 CFR part 2, subpart B. Some of the information you have requested has been claimed to be CBI by petitioning small refineries. We of course have a strict obligation to follow our regulations and protect CBI.

Below is the latest aggregate information regarding the current status of SRE petitions:

- For the 2016 compliance year, EPA received 20 petitions from small refineries. EPA granted exemptions for 19 of those, with a total exempted renewable fuel volume obligation of 790 million RINs. EPA denied one petition. That denial was then challenged by the refinery in question, Ergon-West Virginia. Earlier this month, the United States Court of Appeals for the Fourth Circuit overturned our decision. *Ergon-West Virginia, Inc. v. EPA*, No. 17-1839 (4th Cir. July 20, 2018). The court found our denial to be "arbitrary and capricious." The agency is in the process of determining how best to respond to the court's decision and direction.
- For the 2017 compliance year, EPA received 34 petitions from small refineries. To date, EPA has granted exemptions for 29 of those, with total exempted renewable fuel volume

obligations of 1.46 billion RINs. EPA is still processing the remaining five petitions for the 2017 compliance year.

- EPA has received two petitions for the 2018 compliance year and has yet to act on those requests.

Section 211(o)(9) of the Clean Air Act (CAA) requires the Administrator to temporarily exempt a small refinery from its renewable fuel volume obligations under the RFS program when "disproportionate economic hardship" (DEH) is found. The statute directs EPA, in consultation with the Department of Energy (DOE), to consider the DOE Small Refinery Study and Addendum as well as "other economic factors" in evaluating small refinery exemption petitions.

DOE relies on two primary sources for assessing DEH: (1) the 2011 Small Refinery Exemption Study; and (2) the 2014 Addendum to the Small Refinery Exemption Study.[1] As described in its Study, DOE assesses the potential for DEH at a refinery on the basis of two sets of metrics. One set assesses structural conditions that could disproportionately impact the refinery. The other set assesses economic factors that could cause viability concerns. After evaluating information submitted by a small refinery, DOE provides a recommendation to EPA on whether a refinery merits exemption from RFS.

The DOE analysis informs EPA's finding of whether DEH exists and in turn EPA's resulting decision about whether to grant or deny a petition for an extension of the RFS temporary exemption for a small refinery. In addition to the metrics DOE applies in assessing DEH, EPA may consider information petitioners submit that documents or explains relevant economic conditions or business decisions. EPA may also consider other publicly available information regarding the petitioner.

Over the life of the small refinery program, EPA and DOE have received additional direction from both Congress and the courts. Important to the agency's current approach, are 2014 congressional language, a recent decision from the United States Court of Appeals for the Tenth Circuit and 2017 congressional language. In early SRE decisions, DOE and EPA determined, that DEH existed only when a refinery experienced both disproportionate structural impacts and viability impairment. In 2014, Congress clarified to DOE that DEH exists even if only one of the metrics is met and could then recommend a 50 percent exemption from the RFS. Congress stated: "If the Secretary finds that either of these two components exists, the Secretary is directed to recommend to the EPA Administrator a 50 percent exemption of RFS requirements for the petitioner."[2] Congress did not provide direction on the partial exemption issue to EPA.

During subsequent years, EPA has at times disagreed with DOE SRE recommendations. In response to a challenge to one of those decisions, on August 15, 2017, the United States Court

---

[1] Available at: https://www.epa.gov/renewable-fuel-standard-program/small-refinery-exemption-studies-department-energy

[2] Consolidated Appropriations Act, 2016, Pub. L. No. 114-113 (2015). The Explanatory Statement is available at: https://rules.house.gov/bill/114/hr-2029-sa.

of Appeals for the Tenth Circuit held that EPA's approach to determining DEH was "at odds with Congress's statutory command."[3] The Court further stated:

> EPA has exceeded its statutory authority under the CAA in interpreting the hardship exemption to require a threat to a refinery's survival as an ongoing operation. That interpretation is outside the range of permissible interpretations of the statute and therefore inconsistent with Congress's statutory mandate.[4]

The Court vacated EPA's earlier denial of the 2014 hardship exemption and remanded it back to EPA for further consideration.

In 2017, Congress provided additional clarity in the 2016 Consolidated Appropriations Act stating: "When making decisions about small refinery exemptions under the RFS program, the Agency is directed to follow DOE's recommendations which are to be based on the original 2011 Small Refinery Exemption Study prepared for Congress."[5] The language further directed that if EPA disagrees with DOEs recommendations, then the agency should inform the committee before doing so. Since this direction, the agency's decisions have been consistent with DOE's recommendations.

With regard to reallocation of any exempted small refinery volumes, EPA has a structure laid out in 40 CFR part 80, subpart M. Per these framing regulations, if hardship decisions are made after the annual rule volumes are set for a given year, then that compliance obligation is not reallocated. Since compliance year 2015, EPA has made all hardship decisions after finalizing the respective annual rule, and has not reallocated any exempt small refinery volumes.

EPA has engaged in a number of discussions regarding potential reallocation. Most recently, biofuel producers and USDA urged EPA to make a *projection* of exempted volumes as part of the annual rule process, and then to reallocate these volumes in the final rule. The agency is considering the merits of this proposal.

The Transparency Dashboard as well as ongoing discussions regarding EPA coordination with DOE on DEH, small refinery CBI claims and means to address requests for reallocation are important steps to addressing some of your concerns with the small refinery exemption program. I commit to work with you, your staff and your Senate colleagues to try to find a path forward that addresses all of your concerns.

Beyond the SRE program, we have taken and will continue to take other important actions that are vital to implementing and fulfilling the purpose of the program. Some of these actions include the following:

---

[3] *Sinclair Wyoming Refining Co. v. EPA*, 874 F.3d 1159, 1169 (10th Cir. 2017).
[4] *Id.* at 1161.
[5] Senate Report 114-281, pg. 70, accompanying the 2017 Consolidated Appropriations Act, Pub. L. No. 115-31.

- Annual rulemakings to put in place each set of annual standards as required by law
- Regulatory program adjustments to respond to an evolving market
- Significant compliance and enforcement activities
- Ongoing pathway approvals for new renewable fuels entering the marketplace, including GHG lifecycle assessments
- Defending challenges to our rules and actions

Thank you for your letter. Should you have any further questions, please contact me or our staff may contact Karen Thundiyil in the EPA's Office of Congressional and Intergovernmental Relations at Thundiyil.karen@epa.gov or 202-564-1142.

Sincerely,

William L. Wehrum
Assistant Administrator

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

August 1, 2018

OFFICE OF
AIR AND RADIATION

The Honorable Mike Rounds
United States Senate
Washington, D.C. 20510

Dear Senator Rounds:

After today's hearing at the U.S. Senate Environment and Public Works Committee, the Acting Administrator asked that I follow up to provide additional detail on the U.S. Environmental Protection Agency's (EPA) small refinery exemption (SRE) program under the Renewable Fuel Standard (RFS).

Acting Administration Wheeler and I understand your concern and frustration with the administration of the SRE program. It appears that your concern is rooted, in large measure, in a lack of transparency, which the Acting Administrator has directed me to address.

As an initial step towards that goal, the Office of Air and Radiation plans to develop a Transparency Dashboard that will provide regularly updated information regarding the number of small refinery petitions received and the status of these petitions. The Transparency Dashboard will also convey the total number of exempted gallons and the number of impacted Renewable Identification Numbers (RINs). This will ensure equal access to important market data while improving the overall transparency of the RFS program.

While transparency is an explicit priority, EPA is required to comply with the Confidential Business Information (CBI) regulations laid out in 40 CFR part 2, subpart B. Some of the information you have requested has been claimed to be CBI by petitioning small refineries. We of course have a strict obligation to follow our regulations and protect CBI.

Below is the latest aggregate information regarding the current status of SRE petitions:

- For the 2016 compliance year, EPA received 20 petitions from small refineries. EPA granted exemptions for 19 of those, with a total exempted renewable fuel volume obligation of 790 million RINs. EPA denied one petition. That denial was then challenged by the refinery in question, Ergon-West Virginia. Earlier this month, the United States Court of Appeals for the Fourth Circuit overturned our decision. *Ergon-West Virginia, Inc. v. EPA*, No. 17-1839 (4th Cir. July 20, 2018). The court found our denial to be "arbitrary and capricious." The agency is in the process of determining how best to respond to the court's decision and direction.
- For the 2017 compliance year, EPA received 34 petitions from small refineries. To date, EPA has granted exemptions for 29 of those, with total exempted renewable fuel volume

obligations of 1.46 billion RINs. EPA is still processing the remaining five petitions for the 2017 compliance year.

- EPA has received two petitions for the 2018 compliance year and has yet to act on those requests.

Section 211(o)(9) of the Clean Air Act (CAA) requires the Administrator to temporarily exempt a small refinery from its renewable fuel volume obligations under the RFS program when "disproportionate economic hardship" (DEH) is found. The statute directs EPA, in consultation with the Department of Energy (DOE), to consider the DOE Small Refinery Study and Addendum as well as "other economic factors" in evaluating small refinery exemption petitions.

DOE relies on two primary sources for assessing DEH: (1) the 2011 Small Refinery Exemption Study; and (2) the 2014 Addendum to the Small Refinery Exemption Study.[1] As described in its Study, DOE assesses the potential for DEH at a refinery on the basis of two sets of metrics. One set assesses structural conditions that could disproportionately impact the refinery. The other set assesses economic factors that could cause viability concerns. After evaluating information submitted by a small refinery, DOE provides a recommendation to EPA on whether a refinery merits exemption from RFS.

The DOE analysis informs EPA's finding of whether DEH exists and in turn EPA's resulting decision about whether to grant or deny a petition for an extension of the RFS temporary exemption for a small refinery. In addition to the metrics DOE applies in assessing DEH, EPA may consider information petitioners submit that documents or explains relevant economic conditions or business decisions. EPA may also consider other publicly available information regarding the petitioner.

Over the life of the small refinery program, EPA and DOE have received additional direction from both Congress and the courts. Important to the agency's current approach, are 2014 congressional language, a recent decision from the United States Court of Appeals for the Tenth Circuit and 2017 congressional language. In early SRE decisions, DOE and EPA determined, that DEH existed only when a refinery experienced both disproportionate structural impacts and viability impairment. In 2014, Congress clarified to DOE that DEH exists even if only one of the metrics is met and could then recommend a 50 percent exemption from the RFS. Congress stated: "If the Secretary finds that either of these two components exists, the Secretary is directed to recommend to the EPA Administrator a 50 percent exemption of RFS requirements for the petitioner."[2] Congress did not provide direction on the partial exemption issue to EPA.

During subsequent years, EPA has at times disagreed with DOE SRE recommendations. In response to a challenge to one of those decisions, on August 15, 2017, the United States Court

---

[1] Available at: https://www.epa.gov/renewable-fuel-standard-program/small-refinery-exemption-studies-department-energy

[2] Consolidated Appropriations Act, 2016, Pub. L. No. 114-113 (2015). The Explanatory Statement is available at: https://rules.house.gov/bill/114/hr-2029-sa.

of Appeals for the Tenth Circuit held that EPA's approach to determining DEH was "at odds with Congress's statutory command."[3] The Court further stated:

> EPA has exceeded its statutory authority under the CAA in interpreting the hardship exemption to require a threat to a refinery's survival as an ongoing operation. That interpretation is outside the range of permissible interpretations of the statute and therefore inconsistent with Congress's statutory mandate.[4]

The Court vacated EPA's earlier denial of the 2014 hardship exemption and remanded it back to EPA for further consideration.

In 2017, Congress provided additional clarity in the 2016 Consolidated Appropriations Act stating: "When making decisions about small refinery exemptions under the RFS program, the Agency is directed to follow DOE's recommendations which are to be based on the original 2011 Small Refinery Exemption Study prepared for Congress."[5] The language further directed that if EPA disagrees with DOEs recommendations, then the agency should inform the committee before doing so. Since this direction, the agency's decisions have been consistent with DOE's recommendations.

With regard to reallocation of any exempted small refinery volumes, EPA has a structure laid out in 40 CFR part 80, subpart M. Per these framing regulations, if hardship decisions are made after the annual rule volumes are set for a given year, then that compliance obligation is not reallocated. Since compliance year 2015, EPA has made all hardship decisions after finalizing the respective annual rule, and has not reallocated any exempt small refinery volumes.

EPA has engaged in a number of discussions regarding potential reallocation. Most recently, biofuel producers and USDA urged EPA to make a *projection* of exempted volumes as part of the annual rule process, and then to reallocate these volumes in the final rule. The agency is considering the merits of this proposal.

The Transparency Dashboard as well as ongoing discussions regarding EPA coordination with DOE on DEH, small refinery CBI claims and means to address requests for reallocation are important steps to addressing some of your concerns with the small refinery exemption program. I commit to work with you, your staff and your Senate colleagues to try to find a path forward that addresses all of your concerns.

Beyond the SRE program, we have taken and will continue to take other important actions that are vital to implementing and fulfilling the purpose of the program. Some of these actions include the following:

---

[3] *Sinclair Wyoming Refining Co. v. EPA*, 874 F.3d 1159, 1169 (10th Cir. 2017).
[4] *Id.* at 1161.
[5] Senate Report 114-281, pg. 70, accompanying the 2017 Consolidated Appropriations Act, Pub. L. No. 115-31.

- Annual rulemakings to put in place each set of annual standards as required by law
- Regulatory program adjustments to respond to an evolving market
- Significant compliance and enforcement activities
- Ongoing pathway approvals for new renewable fuels entering the marketplace, including GHG lifecycle assessments
- Defending challenges to our rules and actions

Should you have any further questions, please contact me or our staff may contact Karen Thundiyil in the EPA's Office of Congressional and Intergovernmental Relations at Thundiyil.karen@epa.gov or 202-564-1142.

Sincerely,

William L. Wehrum
Assistant Administrator

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

April 24, 2018

OFFICE OF
AIR AND RADIATION

The Honorable John Barrasso
United States Senate
Washington, D.C. 20510

Dear Senator Barrasso:

Thank you for your letter of March 5, 2018, to the U.S. Environmental Protection Agency (EPA) Administrator Scott Pruitt and U.S. Department of Energy (DOE) Secretary Rick Perry regarding exemptions for small refineries under the Renewable Fuel Standard (RFS) program, and the importance of protecting associated confidential business information (CBI). The Administrator asked that I respond to you on his behalf.

The Administrator is committed to implementing the RFS program in accordance with the statute. EPA evaluates petitions for RFS exemptions from qualifying small refineries on a case-by-case basis, and we consult with DOE on our assessment of those petitions, as required by law. As your letter notes, this process requires evaluation of confidential business information submitted by individual refineries. I can assure you that both EPA and DOE staff understand the sensitivity of such information and take very seriously the need to maintain confidentiality of such information, consistent with our regulations.

EPA has received Freedom of Information Act requests pertaining to administration of the small refinery exemption program. In responding to such inquiries and other requests for information, EPA regulations require that the Agency treat CBI information that an applicant has claimed as such until a final CBI determination is made by the Office of General Counsel. *See* 40 CFR Part 2, Subpart B, Confidentiality of Business Information. To date, the Agency has not made such a determination, and we thus treat the information as CBI, as required by our regulations.

Again, thank you for your letter. If you have further questions, please contact me or your staff may contact Karen Thundiyil in the EPA's Office of Congressional and Intergovernmental Relations at thundiyil.karen@epa.gov or (202) 564-1142.

Sincerely,

William L. Wehrum
Assistant Administrator

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

April 24, 2018

OFFICE OF
AIR AND RADIATION

The Honorable Shelley Moore Capito
United States Senate
Washington, D.C. 20510

Dear Senator Capito:

Thank you for your letter of March 5, 2018, to U.S. Environmental Protection Agency (EPA) Administrator Scott Pruitt and U.S. Department of Energy (DOE) Secretary Rick Perry regarding exemptions for small refineries under the Renewable Fuel Standard (RFS) program, and the importance of protecting associated confidential business information (CBI). The Administrator asked that I respond to you on his behalf.

The Administrator is committed to implementing the RFS program in accordance with the statute. EPA evaluates petitions for RFS exemptions from qualifying small refineries on a case-by-case basis, and we consult with DOE on our assessment of those petitions, as required by law. As your letter notes, this process requires evaluation of confidential business information submitted by individual refineries. I can assure you that both EPA and DOE staff understand the sensitivity of such information and take very seriously the need to maintain confidentiality of such information, consistent with our regulations.

EPA has received Freedom of Information Act requests pertaining to administration of the small refinery exemption program. In responding to such inquiries and other requests for information, EPA regulations require that the Agency treat CBI information that an applicant has claimed as such until a final CBI determination is made by the Office of General Counsel. *See* 40 CFR Part 2, Subpart B, Confidentiality of Business Information. To date, the Agency has not made such a determination, and we thus treat the information as CBI, as required by our regulations.

Again, thank you for your letter. If you have further questions, please contact me or your staff may contact Karen Thundiyil in the EPA's Office of Congressional and Intergovernmental Relations at thundiyil.karen@epa.gov or (202) 564-1142.

Sincerely,

William L. Wehrum
Assistant Administrator

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

February 6, 2018

OFFICE OF
AIR AND RADIATION

The Honorable Robert P. Casey, Jr.
United States Senate
Washington, D.C. 20510

Dear Senator Casey:

Thank you for your letter of September 27, 2017, to the U.S. Environmental Protection Agency Administrator Scott Pruitt, regarding the petition for small refinery hardship relief submitted by American Refining Group, Inc. (ARG).

We appreciate that ARG's Bradford Refinery, located in McKean County, is an important engine of employment in its community and region. We also understand that you, like many other stakeholders, are concerned about the impacts that the renewable fuel standard (RFS) program might have on those refineries. EPA will continue to implement the RFS program, as the law requires. At the same time, we firmly believe that maintaining a diverse U.S. energy supply and a strong economy are both policy imperatives, and that refining jobs, like those at ARG's refinery, are important and valuable.

As you know, under the RFS program, a small refinery may be granted a temporary exemption from its annual Renewable Volume Obligations (RVOs) if it can demonstrate that compliance with the RVOs would cause the refinery to suffer disproportionate economic hardship. We are currently in receipt of ARG's petition for hardship relief for the 2017 compliance year and are in the midst of our evaluation process. EPA evaluates these petitions on a case-by-case basis and we consult with the U.S. Department of Energy, as required by statute. We understand the importance of these determinations to ARG and its employees and we will move forward as quickly as possible. We treat nearly all of the information surrounding these petitions as confidential business information and as such, we are unable provide any further information on the details of our assessment at this time. We will remain engaged, however, with ARG as appropriate throughout the process.

Again, thank you for your letter. If you have further questions, please contact me or your staff may contact Karen Thundiyil in the EPA's Office of Congressional and Intergovernmental Relations at thundiyil.karen@epa.gov or (202) 564-1142.

Sincerely,

William L. Wehrum
Assistant Administrator

Message

From: Cohen, Janet [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D94B854E69CD4F9E80DB946BF9D1C1B2-COHEN, JANET]
Sent: 4/10/2018 1:28:13 PM
To: Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]
Subject: FW: Deadline for submitting a petition for disproportionate economic hardship

Fyi - an example of the kind of questions we're now getting. - j. -

-----Original Message-----
From: Pugliese, Holly
Sent: Tuesday, April 10, 2018 7:30 AM
To: Cohen, Janet <cohen.janet@epa.gov>
Subject: FW: Deadline for submitting a petition for disproportionate economic hardship

Deliberative Process / Ex. 5

Holly Pugliese
Office of Transportation and Air Quality US EPA pugliese.holly@epa.gov

-----Original Message-----
From: Tom Hogan [mailto:tomhogan@turnermason.com]
Sent: Monday, April 09, 2018 5:12 PM
To: Pugliese, Holly <pugliese.holly@epa.gov>
Subject: Deadline for submitting a petition for disproportionate economic hardship

Dear Ms Pugliese,
Thanks for your quick response. Just confirming your response on the deadline for submitting petitions for disproportionate economic hardship for small refineries in the RFS program, a small refinery could submit a petition for any year, 2010 through 2022 now and receive relief retroactively for past years? How would that relief be structured? Would there be a refund from the federal government?

Thanks for your guidance.

Tom
Tom Hogan
Turner, Mason & Co
214-754-0898

Sent from my iPhone

Message

From: Cohen, Janet [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D94B854E69CD4F9E80DB946BF9D1C1B2-COHEN, JANET]
Sent: 12/1/2017 4:28:36 PM
To: Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]
Subject: FW: additional small refinery materials
Attachments: 11_27_17 RFS Small Refinery Grants and Denials_2013-2016.docx; 11_27_17 RFS Small Refinery Grants and Denials_2016 only.docx

From: Cohen, Janet
Sent: Wednesday, November 29, 2017 11:15 AM
To: OTAQ Materials <OTAQMaterials@epa.gov>
Subject: additional small refinery materials

These are the league tables I mentioned at this morning's fuels meeting -- for Chris' review and decision about whether to present to Bill Wehrum. – j. -

Message

From: Cohen, Janet [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D94B854E69CD4F9E80DB946BF9D1C1B2-COHEN, JANET]
Sent: 10/4/2017 3:01:31 PM
To: Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]
Subject: revised briefing
Attachments: 10_5_17 small refinery discussion.pptx

Byron – here's an updated version for your review. Changes from last version are:

- **Deliberative Process / Ex. 5**

- J. -

Message

From: Davis, Theresa [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=44D4095DEB124294BC3B24916CB061BF-DAVIS, THER]
Sent: 4/21/2017 1:33:01 PM
To: OAR-OTAQ-CD (AA) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=11776f6ecf5b404d8f0e354b6c49baab-OAR-OTAQ-CD (AA)]; OAR-OTAQ-CD (DC) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=e49e559dcc1f452fa558b87742b2be84-OAR-OTAQ-CD (DC)]; Bradish, Tracey [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3fe4f1a444da44ee8af1d9b88b17ebb5-Bradish, Tracey]; Cook, Leila [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d4536ad140a1461781d78ca67921b02f-Cook, Leila]; Derksen, Kimberly [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=17034f587f114032927774f8e91ca41f-Derksen, Kimberly]; Johnson, Francene [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=88468ea753ff450bb6dd6f95717084d3-Johnson, Francene]; Kim, Jung [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d86904b675e84564b560026d213caf3a-Kim, Jung]; Soth, Judith [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=49af9a12ff6e4724849a832c580718ad-Soth, Judit]; Wasenko, Barbara [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f98f5c6308684d689ad5b6682035b07e-Wasenko, Barbara]; White, Susan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=793788a2a8e24b67a9e621a97836ea86-White, Susa]; Stewart, Gwen [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3f8c5838943241caadb6005ffaddd7db-gstewart]
Subject: Compliance Division Director's Calendar for Friday, April 21, 2017

Byron Bunker's Calendar
Friday, April 21, 2017

9:00 AM-9:30 AM	IO Daily Staff Meeting AA rm. N-120
10:00 AM-11:00 AM	Mid-year PARS & General with Chris Grundler AA rm. C-174
11:00 AM-12:00 PM	RFS Small Refinery Hardship Decisions AA Rm. C-174/DC Rm. 6520 Conf. Line: Ex. 6 Personal Privacy (PP) Code: Ex. 6 Personal Privacy (PP)
12:00 PM-12:30 PM	1:1 with Ben Hengst Byron will call Ben
2:30 PM-3:00 PM	Mid-year PARS with Janet Cohen Byron's Office
3:00 PM-4:00 PM	Navistar UQS Update Conf. Line: Ex. 6 Personal Privacy (PP) Code: Ex. 6 Personal Privacy (PP)

3:00 PM-4:00 PM OECA/OTAQ Coordination
Byron will call Phillip Brooks

INFORMATIONAL:

AA
Anderson, Tom
Caffrey, Peter 8:15 -11:00 AM
Caffrey, Peter-Flex 11:00 AM-4:45 PM Ex. 6 Personal Privacy (PP)
Chen, Emily
Dalton, Joel
Daly, Alan
Darnell, Gene
Davis, Julian-12-5:00 PM
French, Roberts
Gatica, Staci-Flex 12-5:00 PM Ex. 6 Personal Privacy (PP)
Giuliano, Julia
Gordinier, Terry
Hamady, Fakhri
Healy, Steve
Irving, Sheila
LaCroix, John
Manners, Mary
Mikolajczyk, Christine
Peavyhouse, Bob-Flex Ex. 6 Personal Privacy (PP)
Pidgeon, Bob
Poirier, Christie
Pugliese, Holly
Reed, Deb
Smith, Peter
Snyder, Jim
Steele, Lauren-12-5:00 PM
Vallion, Trina 8:30-10:30 AM & 2-6:00 PM
Williams, Brent
Zaremski, Sara-Flex Ex. 6 Personal Privacy (PP)

DC
Caldwell, Jim
Heard, Geanetta-Flex Ex. 6 Personal Privacy (PP)
Jones, Jacqueline
Le, Madison
Lucca, Jose
Master, Barbora-Flex Ex. 6 Personal Privacy (PP)
McSwain, Deborah
Moses, Darryl
Pastorkovich, Anne-Detail
Somoza, Sandra

Theresa Davis
Technical Support Specialist
USEPA Compliance Division, OTAQ
Serving EPA through SSAI
(734) 214-4540 phone (734) 214-4053 fax
Davis.theresa@epa.gov

Message

From: Grundler, Christopher [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D3BE58C2CC8545D88CF74F3896D4460F-GRUNDLER, CHRISTOPHER]
Sent: 4/20/2017 9:34:25 PM
To: Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]; OTAQ Materials [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d024a3342082470eada2969a12393750-OTAQ Materi]
CC: Cohen, Janet [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d94b854e69cd4f9e80db946bf9d1c1b2-Cohen, Janet]; Li, Ryland (Shengzhi) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7cf0eac9d34b446f88e03f8ec48274f1-Li, Shengzh]; Machiele, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b71a67c326714ebbaa72eda552e55282-Machiele, Paul]; Master, Barbora [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2c813860457b42019078b33089aaeee5-bjemelko]; McKenna, Chris [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=451b675850124bf4a9db1d577ee3b9af-McKenna, Ch]; Michaels, Lauren [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a44e1a5c23404801bd12621455cde517-Reid, Laure]; Parsons, Nick [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7ba9a64331b0449a93ccc46f74d5d1f0-Parsons, Nick]; Piotrowski, Greg [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=40bd03b05b8a409f91fbb8e3432d01ab-Piotrowski, Greg]; Stahle, Susan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b25318c6014d4fb985288e15143c8596-SSTAHLE]; Sutton, Tia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=25e87403f63143acbb959446512a372c-Sutton, Tia]; Weihrauch, John [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=74d426b7439045d9a0a65b186ea68b21-Jweihrau]; Williams, Brent [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=395fc53cc2f34820a565d152d1b9b2bd-Williams, Brent]
Subject: RE: updated rfs briefing materials

Thx.

Judy—I printed these so no need

Christopher Grundler, Director
Office of Transportation and Air Quality
U.S. Environmental Protection Agency
202.564.1682 (Washington, DC)
734.214.4207 (Ann Arbor, MI)

From: Bunker, Byron
Sent: Thursday, April 20, 2017 5:27 PM
To: Grundler, Christopher <grundler.christopher@epa.gov>; OTAQ Materials <OTAQMaterials@epa.gov>
Cc: Cohen, Janet <cohen.janet@epa.gov>; Li, Ryland (Shengzhi) <Li.Ryland@epa.gov>; Machiele, Paul <machiele.paul@epa.gov>; Master, Barbora <Master.Barbora@epa.gov>; McKenna, Chris <McKenna.Chris@epa.gov>; Michaels, Lauren <Michaels.Lauren@epa.gov>; Parsons, Nick <Parsons.Nick@epa.gov>; Piotrowski, Greg <piotrowski.greg@epa.gov>; Stahle, Susan <Stahle.Susan@epa.gov>; Sutton, Tia <sutton.tia@epa.gov>; Weihrauch,

John <Weihrauch.John@epa.gov>; Williams, Brent <Williams.Brent@epa.gov>
Subject: FW: updated rfs briefing materials

Hi Chris,

Attached are the materials for our Small Refinery Hardship meeting with you tomorrow at 11.

Thanks,

Byron

****
Byron Bunker
Director Compliance Division
Office of Transportation and Air Quality
Environmental Protection Agency
2000 Traverwood Drive
Ann Arbor, MI 48105
Bunker.Byron@epa.gov
Phone: (734) 214-4155
Mobile: (734) 353-9623
****

From: Cohen, Janet
Sent: Thursday, April 20, 2017 4:31 PM
To: Bunker, Byron <bunker.byron@epa.gov>; Li, Ryland (Shengzhi) <Li.Ryland@epa.gov>; Machiele, Paul <machiele.paul@epa.gov>; Master, Barbora <Master.Barbora@epa.gov>; McKenna, Chris <McKenna.Chris@epa.gov>; Michaels, Lauren <Michaels.Lauren@epa.gov>; Parsons, Nick <Parsons.Nick@epa.gov>; Piotrowski, Greg <piotrowski.greg@epa.gov>; Stahle, Susan <Stahle.Susan@epa.gov>; Sutton, Tia <sutton.tia@epa.gov>; thomas.white@hq.doe.gov; Weihrauch, John <Weihrauch.John@epa.gov>; Williams, Brent <Williams.Brent@epa.gov>
Subject: updated rfs briefing materials

All – thanks for the comments. This updated version includes your suggestions. I'm also including the summary tables that Barbora has updated.

Byron, this is still marked draft in case you have additional comments. Are you ready for me to remove the" draft" and send to otaq materials?

- J. -

Message

From: Cohen, Janet [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D94B854E69CD4F9E80DB946BF9D1C1B2-COHEN, JANET]
Sent: 4/20/2017 9:16:31 PM
To: Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]
Subject: FW: Materials for tomorrow's 11am small refinery hardship briefing
Attachments: 4_20_17 RFS Small Refinery Grants and Denials_2016 only.docx; 4_20_17 RFS Small Refinery Grants and Denials_2013-2016.docx; 4_20_17 DRAFT small refinery briefing for Chris Grundler pm 20170420 cRSL.pptx; 4_21_17 small refinery briefing for Chris Grundler.pptx

Importance: High

Byron,
See below from Tia to Chris. I asked her what to do since I hadn't been able to confirm that you were ready for these to go forward and that's what she suggested.

I need to leave now. If you are ok with these materials, can you please send them to OTAQ materials? Or if not, let me know and I can work on them later this evening.

I'm attaching two versions here. Deliberative Process / Ex. 5
Deliberative Process / Ex. 5
Deliberative Process / Ex. 5 Otherwise the two versions are the same.

I'm also attaching the two summary tables we've used before.

- J. -

From: Sutton, Tia
Sent: Thursday, April 20, 2017 4:47 PM
To: Grundler, Christopher <grundler.christopher@epa.gov>; Hengst, Benjamin <Hengst.Benjamin@epa.gov>
Cc: Cohen, Janet <cohen.janet@epa.gov>
Subject: Materials for tomorrow's 11am small refinery hardship briefing

Chris,
We do have materials for tomorrow's small refinery hardship briefing, but Byron hasn't had a chance to review just yet. Janet is going to try to connect with Byron before he leaves, so materials should be coming to you later this evening or early tomorrow morning at the latest.

Thanks,
Tia

Message

From: Cohen, Janet [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D94B854E69CD4F9E80DB946BF9D1C1B2-COHEN, JANET]
Sent: 4/20/2017 8:31:24 PM
To: Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]; Li, Ryland (Shengzhi) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7cf0eac9d34b446f88e03f8ec48274f1-Li, Shengzh]; Machiele, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b71a67c326714ebbaa72eda552e55282-Machiele, Paul]; Master, Barbora [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2c813860457b42019078b33089aaeee5-bjemelko]; McKenna, Chris [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=451b675850124bf4a9db1d577ee3b9af-McKenna, Ch]; Michaels, Lauren [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a44e1a5c23404801bd12621455cde517-Reid, Laure]; Parsons, Nick [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7ba9a64331b0449a93ccc46f74d5d1f0-Parsons, Nick]; Piotrowski, Greg [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=40bd03b05b8a409f91fbb8e3432d01ab-Piotrowski, Greg]; Stahle, Susan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b25318c6014d4fb985288e15143c8596-SSTAHLE]; Sutton, Tia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=25e87403f63143acbb959446512a372c-Sutton, Tia]; thomas.white@hq.doe.gov; Weihrauch, John [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=74d426b7439045d9a0a65b186ea68b21-Jweihrau]; Williams, Brent [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=395fc53cc2f34820a565d152d1b9b2bd-Williams, Brent]
Subject: updated rfs briefing materials
Attachments: 4_20_17 RFS Small Refinery Grants and Denials_2013-2016.docx; 4_20_17 RFS Small Refinery Grants and Denials_2016 only.docx; 4_20_17 DRAFT small refinery briefing for Chris Grundler pm 20170420 cRSL.pptx

All – thanks for the comments. This updated version includes your suggestions. I'm also including the summary tables that Barbora has updated.

Byron, this is still marked draft in case you have additional comments. Are you ready for me to remove the" draft" and send to otaq materials?

- J. -

Message

From: Cohen, Janet [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D94B854E69CD4F9E80DB946BF9D1C1B2-COHEN, JANET]
Sent: 4/20/2017 5:12:27 PM
To: Bunker, Byron [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ddf7bcf023d241a9a477a2dc75d5901c-Bunker, Byron]; Li, Ryland (Shengzhi) [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7cf0eac9d34b446f88e03f8ec48274f1-Li, Shengzh]; Machiele, Paul [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b71a67c326714ebbaa72eda552e55282-Machiele, Paul]; Master, Barbora [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2c813860457b42019078b33089aaeee5-bjemelko]; McKenna, Chris [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=451b675850124bf4a9db1d577ee3b9af-McKenna, Ch]; Michaels, Lauren [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a44e1a5c23404801bd12621455cde517-Reid, Laure]; Parsons, Nick [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7ba9a64331b0449a93ccc46f74d5d1f0-Parsons, Nick]; Piotrowski, Greg [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=40bd03b05b8a409f91fbb8e3432d01ab-Piotrowski, Greg]; Stahle, Susan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b25318c6014d4fb985288e15143c8596-SSTAHLE]; Sutton, Tia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=25e87403f63143acbb959446512a372c-Sutton, Tia]; thomas.white@hq.doe.gov; Weihrauch, John [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=74d426b7439045d9a0a65b186ea68b21-Jweihrau]; Williams, Brent [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=395fc53cc2f34820a565d152d1b9b2bd-Williams, Brent]
Subject: FW: draft briefing for your review
Attachments: 4_19_17 DRAFT small refinery briefing for Chris Grundler.pptx; 4_14_17 RFS Small Refinery Grants and Denials_2013-2016.docx; 4_14_17 RFS Small Refinery Grants and Denials_2016 only.docx

Also meant to include as attachments the latest tables. Please everyone double check to make sure these versions Barbora created for us are accurate and up to date. Thanks.

- J. -

From: Cohen, Janet
Sent: Thursday, April 20, 2017 12:11 PM
To: Byron Bunker <Bunker.Byron@epa.gov>; Li, Ryland (Shengzhi) <Li.Ryland@epa.gov>; Machiele, Paul <machiele.paul@epa.gov>; Master, Barbora <Master.Barbora@epa.gov>; McKenna, Chris <mckenna.chris@epa.gov>; Michaels, Lauren <Michaels.Lauren@epa.gov>; Parsons, Nick <Parsons.Nick@epa.gov>; Piotrowski, Greg <piotrowski.greg@epa.gov>; Stahle, Susan <Stahle.Susan@epa.gov>; Sutton, Tia <sutton.tia@epa.gov>; thomas.white@hq.doe.gov; Weihrauch, John <Weihrauch.John@epa.gov>; Williams, Brent <Williams.Brent@epa.gov>
Subject: draft briefing for your review

All – can you please take a look and send me your comments and suggestions, pretty soon if possible so I can incorporate changes and get this up to Chris G. later today. I kept this pretty brief and high level, figuring that we can talk through any detailed questions, but please indicate if you think we should go into more depth, for example on any of the remaining decisions. Or more or less or different on anything.

Chris M. and Lauren – please see comment on appendix slides 11 & 12

Thanks. – j. -

Message

From: Gunasekara.Mandy@epa.gov [Gunasekara.Mandy@epa.gov]
Sent: 12/15/2018 11:51:41 AM
To: Yunaska, Kyle [Kyle.Yunaska@hq.doe.gov]
CC: Dominguez, Alexander [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5ced433b4ef54171864ed98a36cb7a5f-Dominguez,]
Subject: Re: RFS Small Refinery Exemption Waiver

Hey Kyle,
Hope you are well and yes, we are the best contacts for that issue.

Sent from my iPhone

> On Dec 14, 2018, at 12:20 PM, Yunaska, Kyle <Kyle.Yunaska@hq.doe.gov> wrote:
>
> Hi Mandy and Alex,
>
> It has been a long time. I wanted to reach out to see if you are both still the best contacts for the small refinery exemption waiver process. Thanks and have a great weekend.
>
> Kyle
>
> Kyle R. Yunaska
> Senior Advisor and Chief of Staff
> U.S. Department of Energy, Office of Policy
>
>

Message

From: Solan, David [David.Solan@hq.doe.gov]
Sent: 12/17/2018 5:44:31 PM
To: Gunasekara, Mandy [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=53d1a3caa8bb4ebab8a2d28ca59b6f45-Gunasekara,]
CC: Yunaska, Kyle [Kyle.Yunaska@hq.doe.gov]; Dominguez, Alexander [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=5ced433b4ef54171864ed98a36cb7a5f-Dominguez,]
Subject: RE: Request for DOE Documentation of EWV Recommendation

Thanks Mandy -- feel free to give me a call when you follow-up b/c this is a little complex

From: Gunasekara, Mandy [mailto:Gunasekara.Mandy@epa.gov]
Sent: Monday, December 17, 2018 12:42 PM
To: Solan, David <David.Solan@hq.doe.gov>
Cc: Yunaska, Kyle <Kyle.Yunaska@hq.doe.gov>; Dominguez, Alexander <dominguez.alexander@epa.gov>
Subject: Re: Request for DOE Documentation of EWV Recommendation

Hey David,

Thank you for flagging and apologies for the delayed response. **Personal Security Detail / Ex. 6** **Deliberative Process / Ex. 5**

Deliberative Process / Ex. 5

Best,
Mandy

Sent from my iPhone

On Dec 15, 2018, at 11:40 AM, Solan, David <David.Solan@hq.doe.gov> wrote:

> Hi Mandy - for awareness, through our general counsel and under secretary's office we've been working the request we received below from EPA re: the Ergon-WV case. Please let us know if you have a different understanding from within EPA. Although it was a staff-level to staff-level request we had been informed that it was approved through EPA leadership.
>
> Thanks,
>
> David Solan, PhD
> Acting Executive Director
> Office of Policy
> US Dept of Energy
> Desk: (202) 586-2068
> Cell: **Personal Privacy / Ex 6**

From: Cohen, Janet [mailto:cohen.janet@epa.gov]
Sent: Tuesday, November 13, 2018 5:06 PM
To: White, Thomas <Thomas.White@hq.doe.gov>
Cc: Stahle, Susan <Stahle.Susan@epa.gov>
Subject: Request for DOE Documentation of EWV Recommendation
Importance: High

Tom,

As you know, Deliberative Process / Ex. 5

Deliberative Process / Ex. 5

Thanks for your support, please call me if you have any questions or want to talk more about this request.

- J. -

Message

From: Dominguez, Alexander [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5CED433B4EF54171864ED98A36CB7A5F-DOMINGUEZ,]
Sent: 10/6/2017 3:47:01 PM
To: Susan Butler [sbutler@capitolresourcesllc.com]
CC: Gunasekara, Mandy [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=53d1a3caa8bb4ebab8a2d28ca59b6f45-Gunasekara,]
Subject: RE: small refinery hardship scoring process

Hey Susan – Could you give me a call when you have a moment? We spoke with DOE yesterday and I just have a few questions on logistics I would like to briefly discuss. My work cell is 202-578-5985.

Best,
Alex

Alex Dominguez
Policy Analyst to the Senior Advisors to
the Administrator for Air and Water
U.S. Environmental Protection Agency

From: Susan Butler [mailto:sbutler@capitolresourcesllc.com]
Sent: Wednesday, October 4, 2017 10:46 AM
To: Gunasekara, Mandy <Gunasekara.Mandy@epa.gov>; Dominguez, Alexander <dominguez.alexander@epa.gov>
Subject: small refinery hardship scoring process

Good morning! I want to follow up on your offer to the coalition to host a joint meeting with DOE re: the small refinery hardship scoring process. It would be great if we could do that fairly soon as the next cycle will soon be upon us. I've attached the small refinery coalition's suggestions which we believe would streamline the process and make it more objective.

Please let me know if there are any meetings you think we need to have in advance of a joint agency meeting. Many thanks, Susan

Susan Butler
Capitol Resources LLC
915 Prince Street
Alexandria, VA 22314
(703)739-5860 (office)
(703)298-2826 (cell)

Message

From: Parinello, Chris [Chris.Parinello@valero.com]
Sent: 3/5/2018 4:59:43 PM
To: Gunasekara, Mandy [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=53d1a3caa8bb4ebab8a2d28ca59b6f45-Gunasekara,]
CC: Zelermyer, Salo [Salo.Zelermyer@valero.com]
Subject: Charles River Associates Analysis
Attachments: CRA_RIN_PriceContainment_March_2018.pdf

Importance: High

Mandy—Please see the attached analysis from Charlie River Associates . Please let us know if you have any questions. Thanks.—Chris

Chris Parinello
Director, Federal Government Affairs
Valero Energy Corporation
Phone: (202) 560-5451
Email: chris.parinello@valero.com

Message

From: Connors, Sandra [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=CC4F8F838BE74DE797BA9F894A0BC7B5-SCONNORS]
Sent: 2/28/2017 12:38:03 PM
To: Schnare, David [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=96fc79d4007541a69e8b3cf57f6e13b0-Schnare, Da]
CC: Flynn, Mike [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=735bf2d12a064b0998510511c5b4644b-MFlynn]
Subject: Revised Hot Topics for February 28, 2017
Attachments: HOT TOPIC LIST 2017.02.28.docx

Per conversation.

Sandra

Sandra L. Connors
Senior Advisor
Office of the Administrator
US Environmental Protection Agency
1200 Pennsylvania Avenue, Room 3317
Washington, DC 20460
(202)564-4231
connors.sandra@epa.gov

Message

From: Dietrich, Gwen [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=6F776AE4139C41B58AD4592114AB7CC0-DIETRICH, GWEN]
Sent: 9/26/2016 5:51:52 PM
To: Sutton, Tia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=25e87403f63143acbb959446512a372c-Sutton, Tia]; Sun, Lisa [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=40e893e2e4aa4ded825a98cda234c2f5-Sun, Nanhui]; Levin, David [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=9bbf65fe0b2440799918038ab48126aa-Levin, David]; Suarez, Patricia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d27ed72fe37b4f5e8478329696f90076-Suarez, Patricia]; France, Jennifer [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=77bf3fda5a2f4f888cc008ace5f2717e-France, Jennifer]
CC: Birgfeld, Erin [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3383bc15dd5542e5bff5c3de13ba9bf2-EBIRGFEL]; Mylan, Christopher [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=70798537ae234bdeb55b66364fb8f220-Mylan, Christopher]; Richards, David [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1e2937a3dc5840f097c44639a7ac1013-Richards, D]; Burch, Julia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=27b0cd43b0404bab89aef0c8d08c165f-Burch, Julia]
Subject: RE: RFS web page - update to existing page for RFS petition letters
Attachments: epa-rfs-reconsider-decision-api-afpm-monroe-2016-09.pdf; rfs-reconsider-afpm-2016-09-19.pdf; rfs-reconsider-api-2016-09-19.pdf; rfs-reconsider-monroe-2016-09-19.pdf

Tia,
Attached and prepared for posting on the Web:
epa-rfs-reconsider-decision-api-afpm-monroe-2016-09.pdf
File is 180 KB and 17 page.

rfs-reconsider-afpm-2016-09-19.pdf
File is 180 KB and 1 page.

rfs-reconsider-api-2016-09-19.pdf
File is 182 KB and 1 page.

rfs-reconsider-monroe-2016-09-26.pdf
File is 171 KB and 1 page.

Gwen Dietrich
Communications/Graphic Design Specialist
Senior Service America, Inc. (Grantee)
Supporting the Office of Transportation and Air Quality
U.S. Environmental Protection Agency
734-214-4639

From: Sutton, Tia
Sent: Friday, September 23, 2016 5:27 PM
To: Sun, Lisa <Sun.Lisa@epa.gov>; Dietrich, Gwen <Dietrich.Gwen@epa.gov>; Levin, David <Levin.David@epa.gov>; Suarez, Patricia <suarez.patricia@epa.gov>; France, Jennifer <france.jennifer@epa.gov>
Cc: Birgfeld, Erin <Birgfeld.Erin@epa.gov>; Mylan, Christopher <Mylan.Christopher@epa.gov>; Richards, David <Richards.David@epa.gov>; Burch, Julia <Burch.Julia@epa.gov>
Subject: RFS web page - update to existing page for RFS petition letters

Hi Lisa,
We need to do a page update for an existing RFS page, and post a few documents to it. The attached Word file is a mockup of the page. And the 4 pdf files are the letters that will need to be posted with the page update.

Gwen/David- I'm assuming the pdf files will need formatting, so I will leave that all to your expertise.

Please let us know if you have any questions.

Thanks!
-Tia

Response to Petitions of the American Petroleum Institute, American Fuel and Petrochemical Manufacturers, and Monroe Energy LLC for Reconsideration of Portions of the 2013 Renewable Fuel Standards Annual Rule

A. Introduction

On August 15, 2013, the Environmental Protection Agency ("EPA") issued a final rule establishing 2013 renewable fuel standards under the Clean Air Act (the "2013 RFS Standards Rule" or "the Rule"). 78 Fed. Reg. 49794. Subsequently, on October 10, October 11, and October 15, 2013, respectively, the American Fuel and Petrochemical Manufacturers ("AFPM"), the American Petroleum Institute ("API") and Monroe Energy LLC ("Monroe") (collectively, referred to herein as "Petitioners") filed petitions for reconsideration of the Rule. Certain aspects of the Rule were also challenged and upheld in the United States Court of Appeals for the District of Columbia Circuit. *Monroe v. EPA*, 750 F.3d 909 (DC Cir. 2014). Among the issues regarding the Rule that were resolved in EPA's favor in *Monroe* were EPA's authority to issue the 2013 standards after the statutory deadline, EPA's interpretation of its authority to issue waivers pursuant to CAA 211(o)(7)(D), and the reasonableness of EPA's consideration of carryover RINs and cost considerations for various obligated parties in declining to use its waiver authority in establishing the 2013 advanced biofuel and total renewable fuel standards. While some of the matters addressed in *Monroe* overlap with issues raised in the petitions for reconsideration (e.g., AFPM's general arguments with respect to EPA's delay in issuing the standards) and were resolved by the *Monroe* decision, not all of the matters raised in the petitions for reconsideration were resolved by *Monroe*. EPA granted in part the petitions for reconsideration filed by API and AFPM insofar as the petitions related to the 2013 cellulosic biofuel standard. As a result of that reconsideration, EPA issued a revised 2013 cellulosic biofuel standard on May 2, 2014. 79 Fed. Reg. 25025. This revised standard was not challenged

by any party. As a result, all matters in the petitions for reconsideration related to the original 2013 cellulosic biofuel standard are deemed resolved or moot.

This decision document contains EPA's response to the remaining issues raised in the API, AFPM and Monroe petitions for reconsideration that were not resolved or rendered moot by *Monroe* or by EPA's issuance of a revised 2013 cellulosic biofuel standard. The remaining issues are limited to the following:

1. EPA's use in the 2013 RFS Standards Rule of a projection of gasoline and diesel consumption in 2013 from the Energy Information Administration ("EIA") that was submitted to EPA on May 8, 2013, rather than the earlier October 18, 2012 EIA projection that was referenced in the proposed rule (API and AFPM);

2. EPA's adjustment of the final renewable fuel percentage standards in the 2013 RFS Standards Rule to reflect the grant of a small refinery exemption issued in the interim between publication of the proposed and final rules (API and AFPM); and

3. EPA's reaffirmation in the 2013 RFS Standards rule of its established position regarding the eligibility of refineries for small refinery exemptions (Monroe).

B. Standard for Reconsideration

The petitions were submitted under the reconsideration provisions of section 307(d)(7)(B) of the Clean Air Act (CAA). This section strictly limits petitions for reconsideration both in time and scope. It states that:

> Only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. If the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within such time or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule, the Administrator shall convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed. If the Administrator refuses to convene such a proceeding, such person may seek review of such refusal in the United States court of appeals for the appropriate circuit (as provided in subsection (b)). Such reconsideration shall not postpone the effectiveness of the rule. The effectiveness

of the rule may be stayed during such reconsideration, however, by the Administrator or the court for a period not to exceed three months.

Thus the requirement to convene a proceeding to reconsider a rule is based on the petitioner demonstrating to EPA: (1) that it was impracticable to raise the objection during the comment period, or that the grounds for such objection arose after the comment period but within the time specified for judicial review (*i.e.*, within 60 days after publication of the final rulemaking notice in the *Federal Register*, *see* CAA section 307(b)(1)); and (2) that the objection is of central relevance to the outcome of the rule. Regarding the first criterion for reconsideration, a petitioner must show why the issue could not have been presented during the comment period, either because it was impracticable to raise the issue during that time or because the grounds for the issue arose after the period for public comment (but within 60 days of publication of the final action). Thus, CAA section 307(d)(7)(B) does not provide a forum to request EPA to reconsider issues that actually were raised, or could have been raised, during the comment period.

Regarding the second criterion for reconsideration, an objection is of central relevance to the outcome of the rule only if it provides substantial support for the argument that the regulation should be revised.[1]

As discussed in this decision, EPA is denying the AFPM, API and Monroe petitions for reconsideration because they fail to meet one or both of these criteria.

C. EPA Response to Petitions for Reconsideration of the 2013 RFS Standards Rule

1. EPA's use of an updated EIA projection of 2013 gasoline and diesel consumption.

[1] *Coalition for Responsible Regulation v. EPA*, 684 F.3d 102, 125 (DC Cir. 2012).

Clean Air Act Section 211(o)(3)(A) provides that, not later than October 31 of each calendar year, EIA shall provide to EPA "an estimate, with respect to the following calendar year, of the volumes of transportation fuel, biomass-based diesel, and cellulosic biofuel projected to be sold or introduced into commerce in the United States." The statute then specifies that "[n]ot later than November 30 of [each calendar year], *based on the estimate provided under subparagraph (A)*, [EPA] shall determine and publish in the Federal Register, with respect to the following calendar year, the renewable fuel obligation that ensures that the requirements of paragraph (2) are met." *Id.* § 7545(o)(3)(B)(i) (emphasis added).

Each EIA estimate includes three data points - - the total amount of transportation fuel and the amounts of biomass-based diesel and cellulosic biofuel projected to be sold or introduced into commerce in the coming year. The Act treats all of this information similarly; that is, EPA is to "determine" the RFS obligations for each year "based on" the EIA estimate. The United States Court of Appeals for the D.C. Circuit has interpreted this statutory requirement in the context of a challenge to the 2012 cellulosic biofuel standard. *API v. EPA*, 706 F.3d 474, 478 (DC Cir. 2013). The Court held that the Act "[p]lainly . . . [does not] contemplate slavish adherence by EPA to the EIA estimate"; had Congress so intended, "it could have skipped the EPA 'determination' altogether." *Id.* Instead, "EPA [i]s entitled . . . to read the phrase 'based on' as requiring great respect but allowing deviation consistent with that respect." *Id.* Accordingly, the Court upheld EPA's supplementation of EIA's estimate with information EPA received from prospective cellulosic biofuel producers—including information submitted after EPA had received EIA's estimate—for the purpose of "determin[ing]" the 2012 cellulosic biofuel standard. *Id.*[2]

[2] The Court remanded the 2012 cellulosic biofuel standard on other grounds. *Id.* at 479-80.

EPA discussed the *API* decision in the preamble of its proposed 2013 RFS Standards Rule (published approximately two weeks after *API*), and explained how EPA would appropriately use the discretion acknowledged in *API* to determine the 2013 RFS cellulosic biofuel obligations "based on" EIA's estimate. 78 Fed. Reg. 9282 at 9293-94. EPA's proposal further made clear that the final 2013 rule would *not* rely *solely* on EIA's October 2012 estimate and the other information EPA had developed or received prior to the proposal. Rather, EPA also would "continue to monitor the progress of the cellulosic biofuel industry, in particular the progress of the companies which form the basis of our proposed 2013 volume projection." *Id.* at 9295.

In response to the proposed rule, EPA did not receive any comments asserting that it would be improper for EPA to consider more recent EIA information than was included in the October 2012 EIA estimate. To the contrary, Petitioners API and AFPM argued that EPA should *ignore* the October 2012 EIA cellulosic biofuel estimate of 9.6 million actual gallons altogether, and instead should establish a standard at either zero or up to 21,093 gallons based on actual cellulosic biofuel production rates in 2012. *See* April 8, 2013 AFPM comments on proposed 2013 RFS Standards at 11-12; April 8, 2013 API comments on proposed 2013 RFS Standards at 7. Additionally, Petitioners and many other obligated parties specifically cited an updated EIA cellulosic biofuel projection of 5 million gallons that was reported on February 26, 2013 as support for their arguments that EPA should set a lower cellulosic biofuel standard than had been proposed. *See* 78 Fed. Reg. at 49,804 & n.26; *see also, e.g.*, April 8, 2013 API comment letter on proposed 2013 RFS Standards, p.5; April 8, 2013 AFPM comment letter on proposed 2013 RFS Standards, p. 7; April 7, 2013 Monroe comment letter on proposed 2013 RFS Standards

(adopting AFPM comments); April 2, 2013 Marathon Petroleum comment letter on proposed 2013 RFS Standards, p. 2.

"To ensure that [EPA was] using the most up to date information," as it previously had indicated it would do—and consistent with Petitioners' and other commenters' suggestion that the October 2012 EIA estimate was no longer current—"EPA requested and received from EIA an updated projection of cellulosic biofuel production in 2013 on May 8, 2013." 78 Fed. Reg. at 49,804-05 & n.27. The May 2013 EIA estimate projected 4 million actual gallons of cellulosic biofuel production in calendar year 2013, a substantial reduction from the 9.6 million actual gallons EIA had projected in its October 2012 estimate. *Compare* 78 Fed Reg. at 49,805 (citing the May 2013 projected figure), *with id.* at 49,804 at Table II.C.2 (tabulating EIA's October 2012 projections). As Petitioners had requested, EPA took into consideration updated EIA information for cellulosic biofuel for 2013, in conjunction with other appropriate information, in deriving the final cellulosic biofuel applicable volume for 2013. *See generally id.* at 49,804-09. However, the EIA's May 2013 estimate also included lower projections of the total volumes of gasoline and diesel fuel that would be used in 2013. *See* May 8, 2013 letter from A. Michael Schaal, USEIA, to Christopher Grundler, EPA. Just as it used EIA's revised cellulosic volume estimate for the final rule, EPA used these additional revised estimates from EIA in setting the percentage standards for cellulosic biofuel and for the other three categories of renewable fuel. As Petitioners note, the decrease in the estimate of total gasoline and diesel fuel to be used in 2013 had the effect of *increasing* the 2013 renewable fuel *percentage* requirements for each obligated party.

The EPA finds that Petitioners' challenges to EPA's use in the 2013 RFS standards rule of EIA's revised estimates of gasoline and diesel consumption in 2013 do not satisfy the

statutory criteria for reconsideration, both because the challenges could have been raised during the comment period and because they are not of central relevance. First, EPA proposed to rely on EIA estimates of 2013 gasoline and diesel consumption and that proposal was sufficient to alert the public to submit any objections to EIA's estimation methodology. In addition, EPA specifically proposed not to rely for the final rule on EIA's October, 2012 cellulosic biofuel projection, but to update that projection with relevant data obtained between the proposed and final rule. There is no logical reason to update EIA information related to cellulosic biofuel production in deriving the final standards while not updating EIA data related to projected gasoline and diesel use, so EPA's statements in the preamble to the proposed rule were sufficient to put the public on notice that EPA may use updated EIA data for all relevant purposes in deriving the final standards, yet Petitioners failed to submit comments on this issue. Moreover, the fact that the Petitioners *asked* EPA to take into consideration the downward revision of EIA's cellulosic volume projection, and to reject the October, 2012 EIA cellulosic biofuel projection altogether to set a volume requirement based on actual use in 2012 confirms that Petitioners viewed the question of whether October 2012 projections or updated data should be used in setting the standards as an appropriate subject for comment.

Second, even assuming arguendo that Petitioners could not have raised this issue during the period for public comment, the requests for reconsideration based on use of updated EIA data are appropriately denied since this issue is not of central relevance. An objection is of central relevance to the outcome of the rule only if it provides substantial support for the argument that the regulation should be revised. *Coalition for Responsible Regulation v. EPA*, 684 F.3d 102, 125 (DC Cir. 2012). This conclusion is supported by the Clean Air Act provision noting that a Court may only invalidate a rule due to an alleged procedural error "if the error [was] so serious

and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made." 42 U.S.C. § 7607(d)(8); *see, e.g., Portland Cement*, 665 F.3d 177, 192 (D.C. Cir. 2011). The D.C. Circuit's decision in *API* dispelled any notion that the statute somehow prohibits EPA from supplementing EIA's October estimate with additional pertinent information for the purpose of "determining" the calendar year renewable fuel standards. If EPA may consider supplemental information from EIA's underlying data sources, surely it may also consider an updated estimate from EIA itself. Likewise, if EPA may consider updated EIA estimates of cellulosic biofuel production, as the Petitioners advocated when they submitted their rulemaking comments, then surely EPA may also reasonably consider other updated portions of EIA's estimate, including its projections of total gasoline and diesel fuel use.

In addition the D.C. Circuit, which is charged with reviewing all challenges to Clean Air Act rules, has long held that "an agency may use supplementary data, unavailable during the notice and comment period that expands on and confirms information contained in the proposed rulemaking and addresses alleged deficiencies in the pre-existing data, so long as no prejudice is shown." *Solite Corp. v. EPA*, 952 F.2d 473, 484 (D.C. Cir. 1991) (internal quotations and alterations omitted). Petitioners were not prejudiced by the EPA's use of the updated data, under *Solite*.

> Petitioners do not point to inaccuracies in the data contained in the [survey]. See *Community Nutrition Institute, 749 F.2d at 58* (no prejudice from agency's response to comments in form of "new scientific studies" where petitioners did "not even suggest that the new studies were defective"). Nor does the record suggest that EPA hid or disguised the information it used, or otherwise conducted the rulemaking in bad faith.

Solite, 952 F.2d at 484. As was the case in *Solite,* Petitioners here do not identify any deficiency or inaccuracy in EIA's revised estimate of total gasoline and diesel fuel use, and

therefore were not prejudiced by the Agency's use of this information. Indeed, in this case, having received comments specifically advocating that the Agency use updated EIA projections of cellulosic biofuel production, it was appropriate for EPA both to follow the commenters' specific suggestion regarding updated cellulosic biofuel production estimates *and* to follow the *logic* of their suggestion by also using EIA's revised projections of total gasoline and diesel fuel. *See BASF Wyandotte Corp. v. Costle*, 598 F.2d 637, 643 (1st Cir. 1979) (finding notice adequate where commenters criticized proposed subcategorization and suggested additional subcategories for final rule, and EPA agreed with criticism of its proposal but responded by creating *fewer* subcategories); *accord Ne. Md. Waste Disposal Auth. v. EPA*, 358 F.3d 936, 951 (D.C. Cir. 2004) ("Agencies [] are free. . . to modify proposed rules as a result of the comments they receive."); *Am. Frozen Food Inst. v. Train*, 539 F.2d 107, 134-35 (D.C. Cir. 1976) (same); *see also Treasure State Resource v. EPA*, 805 F.3d 300, 304 (D.C. Cir. 2015)(EPA use of new "weight of the evidence" rule in non-attainment designations upheld despite claims of inadequate notice and comment where the new rule merely codified established practice.).

EPA's methodology in calculating the percentage standards did not change as a result of using the additional EIA data. Rather, EPA used the additional data as more accurate inputs for the formula described in the proposal and set forth in the RFS regulations. Moreover, the differences between the proposed and final percentage standards that resulted, in part, from EPA's revised estimate of total gasoline and diesel fuel use were minor: the total renewable fuels percentage went up slightly from 9.63% to 9.74%; the advanced biofuel percentage changed from 1.60% to 1.62%; the biomass-based diesel percentage changed from 1.12% to 1.13%; and the cellulosic biofuel percentage *decreased* from 0.008% to 0.004%. *Compare* 78

Fed. Reg. at 9286 (Table 1.B.3-2), *with id.* at 49,798 (Table 1.B.3-2).[3] The mere fact that there was some change in the percentages does not, by itself, mean that the final rule was not a "logical outgrowth" of the proposal. Indeed, the 2010 rule upheld in *Nat'l Petrochemical & Refiners Ass'n v.* EPA, 630 F.3d 145 (DC Cir. 2010), involved comparable or greater increases in the final percentage standards as compared with the proposal—for example, the total renewable fuel percentage standard changed from 8.01% to 8.25% in the final 2010 rule, while the advanced biofuel standard changed from 0.59% to 0.61%. *Compare* 74 Fed Reg. 24,904, 24,915, *with* 75 Fed. Reg. at 14,718. If EPA were "required to adopt a final rule that is *identical* to the proposed rule," it "could learn from the comments on its proposals only at the peril of subjecting itself to rulemaking without end." *Ne. Md. Waste Disposal*, 358 F.3d at 951 (emphasis added, internal quotation and citation omitted); *see also Am. Frozen Food*, 539 F.2d at 135 n.51.

Because EPA was not precluded from using updated EIA data in the final rule, and because Petitioners have not identified any substantive concerns with the updated EIA data, Petitioners have failed to demonstrate that their objection is of central relevance to the rulemaking (i.e., that their objection provides substantial support for the argument that the regulation should be revised). *See Treasure State Resource v. EPA*, 805 F.3d at 304 (challenge to EPA use of data from monitor calibrated to a prior air quality standard denied where petitioner presented no evidence that the monitor provided a faulty measurement).

EPA is therefore denying reconsideration of the Rule based on this objection, both because the objection could have been raised during the comment period and because the objection is not of central relevance.

---

[3] After reconsideration, the final cellulosic biofuel standard was further reduced to 0.0005%. 79 Fed. Reg. 25025, 25031.

2. EPA's adjustment of the final percentage standards to reflect the grant of a small refinery exemption

In the Energy Policy Act of 2005, Congress temporarily exempted certain small refineries from RFS obligations through December 31, 2010, and provided for possible continuation of the exemptions based either on a study to be conducted by the Department of Energy, or in response to petitions from small refineries alleging that compliance with RFS requirements would cause them disproportionate economic hardship. *See* CAA 211(o)(9)(A), (B). Although major amendments to the RFS program were enacted as part of the Energy Independence and Security Act of 2007, there were no modifications to the small refinery exemption provisions. *See* 78 Fed. Reg. at 9302-03 (describing the history of the exemptions); 40 C.F.R. §§ 80.1441, 80.1442 (codifying the exemptions); *see also* CAA 211(o)(1)(K)(defining "small refinery"). EPA subsequently extended the exemption through December 31, 2012 for certain small refineries based on the results of the Department of Energy study, as required by CAA 211(o)(9)(A)(ii). *See* 78 Fed. Reg. at 9303. Prior to the 2013 rulemaking, EPA had granted several case-by-case small refinery exemptions for both the 2011 and 2012 calendar years. *See id.*

EPA's 2010 rule codified a provision requiring that the calculation of the final RFS percentage standards adopted for each calendar year take into account any small refinery exemptions granted for that year. *See* 40 C.F.R. § 80.1405(c).[4] Consistent with that requirement, EPA's established practice in RFS rulemakings is that, "[i]f additional individual refinery requests for exemptions are approved following the release of [a proposed RFS rule], the

[4] This provision identifies the equations used to calculate each of the four RFS percentage standards. Id. In each equation, quantities designated as "GE_i" and "DE_i," respectively, are both subtracted from the denominator. Id. "GE_i" and "DE_i" represent the amounts of gasoline and diesel fuel, respectively, "projected to be produced by exempt small refineries and small refiners, in year i, in gallons, in any year they are exempt per §§ 80.1441 and 1442." *Id.*

final standards will be adjusted to account for those exempted volumes of gasoline and diesel." 76 Fed. Reg. 38,844, 38,859 (preamble to proposed 2012 rule); *see also* 77 Fed. Reg. 1320, 1341 (adjustment in final 2012 rule).

In the February 2013 proposed rule preamble, EPA explained that it had "calculated the proposed 2013 standards without a small refinery/small refiner adjustment" because, "at [that] time, no exemptions ha[d] been approved for 2013." 78 Fed. Reg. at 9303. However, EPA made clear that the calculation of the final 2013 standards would be adjusted accordingly in the event EPA granted any small refiner exemptions prior to promulgating the final rule:

> [I]f an individual small refinery or small refiner requests an exemption and is approved following the release of this NPRM and prior to issuance of the final rule, the final standards will be adjusted upward to account for the exempted volumes of gasoline and diesel.

Id. EPA did not request comment on this approach or suggest that the Agency was in any way reevaluating it. Instead, EPA only requested comment on whether it would be appropriate to make *subsequent* changes to the 2013 standards "if small refiner exemptions are granted *after* the final rule is issued," while noting that such changes would be less than ideal in EPA's view because "[p]eriodic revisions . . . to reflect waivers issued to small refineries or refiners would be inconsistent with the statutory text, and would introduce an undesirable level of uncertainty for obligated parties." *Id.* (emphasis added). In the final rule, EPA adjusted the standards to account for one small refinery exemption that it had approved after the proposal and prior to promulgating the final rule, but determined that it would not make any *further* adjustments to the standards in the event it granted additional exemptions *after* promulgation. *See* 78 Fed. Reg. at 49,825 ("EPA has granted one exemption for 2013. However, any requests for exemption that are approved after the release of today's final rulemaking will not affect the 2013 standards.").

Petitioners object to the final standards' adjusted calculation based on the one small refiner exemption EPA approved before it promulgated the final rule. As shown above, a provision of EPA's 2010 rule—codified at 40 C.F.R. § 80.1405(c)—*required* EPA to adjust the final 2013 standards in this manner. Thus, Petitioners' quarrel is with the 2010 rule, and it is too late to challenge that rule here. *See* CAA 307(b)(1).

Even if EPA's February 2013 proposal could somehow be construed to have reopened this issue—and it cannot since, as shown above, EPA specifically limited its request for comments to the issue of whether to revise the 2013 standards based on exemptions approved *after* promulgating them—Petitioners' request for reconsideration would still be appropriately denied for failure to raise their objection during the comment period. None of the comments EPA received took issue with EPA's statement in the proposed rule preamble that it would adjust the 2013 proposed standards to account for any small refinery exemptions granted prior to promulgating the final rule.[5] Accordingly, reconsideration is appropriately denied on this basis alone.

In any event, granting the small refiner exemption made virtually no difference in the final percentage standards for 2013. By using the values for the equation terms in Table IV.B.3-1 of the final rule preamble, and assuming zeroes for the quantities "GE_I" and "DE_I," it is possible to re-calculate the final 2013 percentage standards as if there had been no exemption. *See* 78 Fed. Reg. at 49,826; *see also* 40 C.F.R. § 80.1405(c) (explaining the equation terms). The result, if this exercise were performed, is that the cellulosic biofuel, biomass-based diesel,

[5] EPA acknowledged one commenter who it understood was "opposed to further extending exemptions to small entities," but who further commented that, "lawfully, the standards must be adjusted *whenever* a waiver is granted." 78 Fed. Reg. at 49,826 (emphasis added). While this comment may have disagreed with EPA's decision *not* to revise the standards based on small refiner exemptions granted *after* promulgating the final rule—a decision that no party challenges here—it did not object to EPA's position on the question for which Petitioners seek reconsideration.

and advanced biofuel percentage standards would be unchanged, and the total renewable fuel standard would be negligibly reduced from 9.74% to 9.73%. Thus, granting the exemption and then accounting for it in the final standards as the existing regulations *required* EPA to do, had only a *de minimis* effect on the total renewable fuel standard and otherwise had no effect at all.

Finally, even if EPA had not established this approach in a prior rulemaking, EPA continues to believe that it would have been the appropriate approach to adopt in this rulemaking. Petitioners API and AFPM suggest that the need for regulatory certainty and the fact that the rule was issued after the statutory deadline provide a sufficient basis to ignore the impact of the small refiner exemption on the percentage standards. API Petition at 5; AFPM Petition at 12. EPA appreciates the benefits of regulatory certainty, especially after standards are established, but also is charged with achieving the Act's objectives of ensuring that applicable volumes of renewable fuel are used in the transportation sector. In order to balance those competing considerations, EPA concluded that small refinery exemptions granted prior to the final rule should be reflected in the percentage standards but those granted after the final rule should not. After considering Petitioners' arguments, EPA continues to believe that this is an appropriate balancing. Likewise, while EPA recognizes the additional issues created by missing the statutory deadline for the final rule, EPA believes that we properly took those issues into consideration in issuing the rule, including the impact of the single small refinery exemption. Accordingly, Petitioners' objection is not of central relevance since it does not provide substantial support for the argument that the regulation should be revised.

3. Eligibility for Small Refinery Adjustment

In the NPRM for the 2013 RFS Standards Rule, EPA solicited public comment on two areas related to small refiner/refinery exemptions. The first was whether it would be appropriate

to extend the two-year exemption for small refineries that was provided as a result of the DOE study pursuant to 211(o)(9)(A)(ii)(II). The second was whether EPA should amend the annual percentage standards established by rule to reflect small refinery exemptions that may be approved after issuance of a final rule. 78 Fed. Reg. 9303; *see also* 78 Fed. Reg. 49825-6. In discussing comments received on these two matters, EPA also noted that it had received comments suggesting that EPA extend the opportunity for waivers to mid-size refiners, on the basis that such refiners do not own ethanol facilities, have little control of the RIN and ethanol markets, their location prohibits the export of gasoline, and they have limited financial resources. 78 Fed. Reg. 49825. EPA also noted that this same commenter took issue with EPA's practice of considering "economic viability" in its evaluation of small refinery hardship petitions, when the commenter thought the inquiry should be limited to whether a refiner suffers disproportionately to others in the industry. *Id* at 49825-6. In responding to these comments, EPA explained the Act's provisions, and the regulatory history associated with current requirements, and explained that it interpreted the small refinery exemption provision to require a showing of "hardship" in addition to "disproportionate impact."

Petitioner Monroe correctly notes that EPA did not solicit public comment on the concept of expanding small refinery exemptions to cover mid-size refiners. Indeed, as Monroe notes, "that issue was well beyond the scope of EPA's requests for comment." Monroe Petition at 2. Monroe argues, however, that by responding to these beyond-the-scope comments, that EPA "considered extending" the hardship exemption to a broader class of obligated parties and that "as a result of EPA's failure to advise the public that it was willing, within the scope of its rulemaking, to consider extending the hardship exemption for small refineries and small refiners to other obligated parties, interested parties like Monroe were deprived of their opportunity to

offer evidence in support of such a rule change." Monroe argues that this procedural defect, as well as the substantive reasons it articulates in support of a rule change to allow additional obligated parties to qualify for hardship relief, justify reconsideration.

Monroe errs in assuming that EPA "considered extending" the hardship exemption to a broader class of obligated parties simply because EPA provided an explanation of the regulatory history and justification for the longstanding rules related to small refinery exemptions in the preamble to the final rule.[6] The scope of the small refinery exemption was set in the 2007 rulemaking implementing the original RFS provisions adopted through the Energy Policy Act of 2005. Those provisions were retained, with only minor conforming modifications, in the major 2010 rulemaking implementing the provisions of the 2007 Energy Independence and Security Act. EPA did not propose amending these provisions, and did not "consider" doing so in the 2013 RFS Standards Rule. It is well settled that agencies do not "reopen" a settled matter when, in response to comments that are beyond the scope of the rulemaking the Agency merely reaffirms its prior position. *United Transportation Union v. Surface Transportation Board*, 132 F.3d 71, 76 (DC Cir. 1998). This approach prevents "bootstrap procedures by which petitioners can comment on matters other than those actually at issue, goad an agency into a reply, and then sue on the grounds that the agency has re-opened the issue." *Id.* Monroe attempts just such a bootstrapping procedure here – arguing that EPA has reopened or should reopen a settled issue simply because it responded to other parties' beyond-the-scope comments by reaffirming its prior long-held position. Because a possible expansion of the small refiner/refinery exemption

[6] Monroe inartfully attempts to twist EPA's explanation of why it was not extending the 2-year exemption already provided to qualifying small refineries as a result of the DOE study (because there was no evidence of hardship that would "threaten the viability" of the companies) into a new justification for the longstanding limitations on the size of refineries that are eligible for small refinery relief that EPA merely explained in preceding text. *See* Monroe Pet. at 4.

provisions to additional obligated parties was not within the scope of the 2013 RFS Standards Rule, Monroe has not raised an objection of central relevance to the rulemaking, and Monroe's petition for reconsideration is denied.

D. Conclusion

For the reasons described above, the components of the AFPM, API and Monroe petitions for reconsideration of the 2013 RFS Standards Rule that were not earlier resolved through the *Monroe* case or prior EPA administrative action are denied.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

August 7, 2018

OFFICE OF
AIR AND RADIATION

The Honorable Dave Loebsack
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Loebsack:

Thank you for your letter of April 26, 2018, to the U.S. Environmental Protection Agency (EPA), regarding small refinery exemptions (SREs) granted to certain obligated parties under the Renewable Fuel Standard (RFS) program.

Congress established SREs, recognizing that small refineries may, in some cases, require hardship exemptions under the RFS program. Section 211(o)(9) of the Clean Air Act (CAA) authorizes the Administrator to temporarily exempt small refineries from their renewable fuel volume obligations under the RFS program on the basis of a finding of "disproportionate economic hardship." The statute directs EPA, in consultation with the Department of Energy (DOE), to consider the DOE Small Refinery Study and "other economic factors" in evaluating SRE petitions. Over the past several years, working in close consultation with DOE, EPA has implemented the SRE provisions of the CAA. We appreciate that the SREs granted over the past several months have been the focus of many stakeholders' attention, but we are required by statute to implement these provisions and we will continue to manage the program consistent with the law.

Your letter also requested information related to those small refineries granted exemptions in 2015, 2016, 2017, and 2018. EPA is unable to provide information that is fully responsive to your request as we treat both the names of individual petitioners and EPA's decision on those petitions as Confidential Business Information (CBI). See 40 C.F.R. part 2, subpart B, Confidentiality of Business Information (specifying the requirements for protecting information for which a claim of business confidentiality has been made and the procedures for resolving a claim and protecting or disclosing information). However, we can share the following aggregated information regarding SREs for the years you've requested:

- For the 2015 compliance year, we received 15 petitions from small refineries. We granted exemptions for 7 of those, with a total exempted renewable fuel volume obligation of 292.5 million RINs. We denied 6 petitions. One petitioner was determined to be ineligible.
- For the 2016 compliance year, we received 20 petitions from small refineries. We granted exemptions for 19 of those, with a total exempted renewable fuel volume obligation of 790 million RINs. We denied 1 petition.
- For the 2017 compliance year, we have received 34 petitions from small refineries. To date, we have granted exemptions for 29 of those, with a total exempted renewable fuel volume

obligation of 1.46 billion RINs. We are still processing the remaining 5 petitions for hardship exemptions for the 2017 compliance year.

- To date, we have received 2 petitions for the 2018 compliance year.

EPA appreciates the importance of the RFS program to stakeholders across the country, including farmers, producers, and obligated parties like refiners and importers. As such, we are interested in ensuring the program is implemented in a fair and effective manner. We look forward to working with you and your colleagues as we continue to look for opportunities to improve the operation of the program.

Again, thank you for your letter. If you have further questions, please contact me or your staff may contact Karen Thundiyil in the EPA's Office of Congressional and Intergovernmental Relations at thundiyil.karen@epa.gov or 202-564-1142.

Sincerely,

William L. Wehrum
Assistant Administrator

Message

From: Sutton, Tia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=25E87403F63143ACBB959446512A372C-SUTTON, TIA]
Sent: 1/30/2015 7:26:34 PM
To: Iffland, JoNell [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=269c8731e7c6417482f8a8ddccfc4887-Iffland, JoNell]
Subject: The 2 attached documents should be printing now
Attachments: RFS transcript Dec 10 2014.docx; House Oversight hearing Dec 10 2014 QA set#4.docx

These 2 things should be printing:

- Hearing transcript (38 pgs)
- Hearing Q&As for Janet (8 pgs)

I'm waiting on 2 more things and will get them to you ASAP!

Message

From: Sutton, Tia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=25E87403F63143ACBB959446512A372C-SUTTON, TIA]
Sent: 8/7/2015 4:10:51 PM
To: Lubetsky, Jonathan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=e125d09a658e48119789ccae5712b4a5-JLUBETSK]; Haman, Patricia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0ebb27cd881d41b19a30a491dc3f3f57-phaman]
CC: Niebling, William [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8fb45c85622f4be5a2f0ce12a9798204-Niebling, W]; Cyran, Carissa [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8a903847a9424979b89400688b5c2f5e-Cyran, Carissa]
Subject: OTAQ responses to June 18 HSGAC-RAFM Hearing QFRs
Attachments: June 18 HSGAC-RAFM Hearing QFRs v7.docx

Hi everyone,
Please see attached for our responses to the RAFM 6/18 QFRs. We did work these responses with OGC and they also incorporate preliminary comments from Pat – these have all been reviewed and approved by Chris Grundler as well.

Thanks,
Tia

Message

From: Sutton, Tia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=25E87403F63143ACBB959446512A372C-SUTTON, TIA]
Sent: 7/10/2015 2:51:32 PM
To: Hengst, Benjamin [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c414e2bf04a246bb987d88498eefff06-Hengst, Benjamin]
Subject: Hearing testimony (updated for 7/22) & Small refinery piece
Attachments: 2a. Testimony.docx; 4a Small Refinery Hardship.docx

Morning!
Went ahead and updated the testimony for the EPW hearing (mostly small tweaks), but wanted to send to you in case there were other more substantive things you wanted to add. Niebletsky seemed fine with us keeping the testimony pretty much the same though.

Also, here's the updated small refinery piece from Janet C & Sue.

Will plan to put these in Janet's book tonight for review.

Message

From: Sutton, Tia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=25E87403F63143ACBB959446512A372C-SUTTON, TIA]
Sent: 7/18/2018 8:41:31 PM
To: OAR Briefings [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2da922b09b7a4a18a19571005bff0297-OAR Briefin]
CC: Hengst, Benjamin [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c414e2bf04a246bb987d88498eefff06-Hengst, Benjamin]; Burch, Julia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=27b0cd43b0404bab89aef0c8d08c165f-Burch, Julia]
Subject: Materials for 10am OTAQ Fuels Weekly
Attachments: Agenda for OTAQ Fuels Weekly with Bill W 7-19-18.docx; Condensate One Pager_7.17.18_Clean for CGdocx.docx; A Return to RFS Land Final.pptx

Hi all,
Attached are the following materials for Thursday's 10am OTAQ Fuels Weekly:

- Agenda
- Condensate one-pager
- Return to RFSLand briefing

One final item will be coming shortly as well:

- Reset & BBD briefing

Thanks!
-Tia

Periodic Reviews for the Renewable Fuel Standard Program

United States Environmental Protection Agency

Periodic Reviews for the Renewable Fuel Standard Program

Assessment and Standards Division
Office of Transportation and Air Quality
U.S. Environmental Protection Agency

United States Environmental Protection Agency

EPA-420-S-17-002
November 2017

Periodic Reviews for the Renewable Fuel Standard Program

Under Section 211(o)(11) of the Clean Air Act, EPA is required to conduct certain periodic reviews. The paragraph provides that:

> To allow for the appropriate adjustment of the requirements described in subparagraph (B) of paragraph (2), the Administrator shall conduct periodic reviews of—
> (A) existing technologies;
> (B) the feasibility of achieving compliance with the requirements; and
> (C) the impacts of the requirements described in subsection (a)(2) on each individual and entity described in paragraph (2).

This document explains our interpretation of this paragraph and describes how we have fulfilled it. Section I explains our interpretation of the statutory text, including both ambiguities and unintelligible aspects of Subparagraph (C). Section II describes our fulfillment of the obligation to conduct periodic reviews notwithstanding the interpretive issues, and the contexts in which we have used the results of those periodic reviews.

I. Legal Interpretation of CAA 211(o)(11)

A. Introductory Text

The language in the introductory text of 211(o)(11) is ambiguous in many respects, and provides EPA significant discretion to determine how and when the periodic reviews will be conducted and made available to the public. For one, the statute does not provide direction on the extent of the required reviews (e.g. qualitative versus quantitative), or the format in which periodic reviews must be publicized (e.g. standalone reports versus assessments done in the context of other actions, such as setting annual RFS standards or responding to petitions for rulemaking). The statute merely directs EPA to conduct "reviews," a broad and open-ended activity which requires the exercise of agency judgment. *See review*, BLACK'S LAW DICTIONARY 1514 (10th ed. 2014) (defining "review" as "[c]onsideration, inspection, or reexamination of a subject or thing"). Further, it is reasonable to interpret the scope of the review in light of the scope of EPA's actions in making "appropriate adjustment" of the relevant RFS requirements, where the word "appropriate" further highlights the significant discretion conferred upon EPA. *See Michigan v. EPA*, 135 S. Ct. 2699, 2707 (2015) (explaining that "'appropriate' is the classic broad and all-encompassing term" and "leaves agencies with flexibility").

In addition, the statute does not require the issuance of any specific and discrete agency document or action, or for EPA to identify at the time it takes actions that is satisfying the

periodic review provision. It does not require EPA to issue this document. [1] It suffices that EPA has, on a periodic basis, taken actions with the effect of complying with the provision. *See Murray Energy Corp. v. EPA*, 861 F.3d 529, 533 n.1 (4th Cir. 2017) (explaining that EPA's actions could satisfy CAA section 321 even though they were not prepared with the intent of doing so).

The statute also does not specify the precise timing or frequency with which EPA must complete the reviews. It sets neither a deadline for the first review, nor time intervals at which that review must be updated or subsequent reviews completed. Rather, the statute only directs EPA to conduct "periodic reviews" to "allow for the appropriate adjustment" of the requirements in Section 211(o)(2)(B), indicating that such reviews should occur more than once and facilitate the "appropriate adjustment" of the relevant requirements.

In addition, the phrase "appropriate adjustment" does not indicate which statutory adjustment provision it is referring to. There are three provisions in Section 211(o) that authorize the agency to "adjust" some aspect of the RFS program:

- Section 211(o)(3)(C) - Adjustments to percentage standards
- Section 211(o)(4) - Adjustments to greenhouse gas reduction percentages
- Section 211(o)(7)(D)(ii) - Adjustments to cellulosic waiver credit prices for inflation

None of these provisions authorize EPA to adjust the renewable fuel applicable volumes specified in Section 211(o)(2)(B).

On the other hand, the statute, without explicitly using the words "adjust" or "adjustment," does authorize EPA to use its authorities in Section 211(o)(7)(A)-(E) to waive the applicable volumes in Section 211(o)(2)(B) in appropriate circumstances, and to set and reset the statutory volume targets in Section 211(o)(2)(B) in the circumstances described in Section 211(o)(2)(B)(ii) and Section 211(o)(7)(F) respectively.[2] EPA thus interprets the phrase "appropriate adjustment" to refer to the waiver and reset and set authorities described in 211(o)(7) and 211(o)(2)(B)(ii). We have not to date adjusted any of the statutory volume targets under the reset provisions of (o)(7)(F). However, we have used both the set and waiver provisions to establish standards:

1. We have set the biomass-based diesel volume under 211(o)(2)(B)(ii) for 2013 and all subsequent years.

---

[1] Unlike our annual standards and certain other RFS regulatory actions that do establish legal requirements for regulated parties, neither our interpretation of the statute nor the description of our studies in this document require any party or the agency to do (or not do) anything beyond what the statute requires. The underlying studies themselves also do not impose any such requirements. In addition, our reviews of the RFS program occur on a continuing basis, and are subject to change in both approach and results. Indeed, we regularly consider new approaches and update our RFS technical analysis, and we intend to continue doing so. For instance, as described below, in deciding whether or not to exercise our waiver authorities in RFS annual standards rules, EPA reviews relevant aspects of the program based on updated data and new technical methods as appropriate.

[2] We also note that Section 211(o)(8) allowed EPA to waive statutory volume targets in calendar year 2006, but not in any later year.

2. We have used the cellulosic waiver authority to reduce the applicable volume for cellulosic biofuel for every year since 2010, and to reduce the applicable volumes for advanced biofuel and total renewable fuel for every year since 2014.
3. We have used the general waiver authority, on the basis of a finding of inadequate domestic supply, to provide a further reduction in the total renewable fuel applicable volume, beyond that obtained through use of the cellulosic waiver authority, in 2016.[3]

We have also considered, but denied, a number of petitions since 2007 that have requested that we exercise the general waiver authority to address alleged severe economic harm or alleged inadequate domestic supply of cellulosic biofuel. As described in more detail below, we have conducted the periodic reviews required by 211(o)(11) in the context of the above decisions, as well as in other contexts, and the results of the periodic reviews have informed these decisions.[4]

B. Subparagraph (C)

Subparagraph (C) presents particular interpretive issues due to a cross-reference to a paragraph that does not exist. As a result, we conclude that Subparagraph (C) is unintelligible and inoperative. But if we assume this provision is operative, we would construe it as directing EPA to review the impacts of the RFS volume requirements on refineries, blenders, distributors, and importers; as well as on consumers of transportation fuel.

1. Unintelligible and Inoperative

Subparagraph (C) directs EPA to consider "the impacts of the requirements described in subsection (a)(2) of this section on each individual and entity described in paragraph (2)." However, "subsection (a)(2)," which naturally refers to Section 211(a)(2), does not exist, nor did it exist at the time when EISA was passed.[5] It is impossible for EPA to review the impacts of the requirements described in a nonexistent provision. The reference to "subsection (a)(2) of this section" is thus unintelligible, and an "unintelligible text is inoperative." ANTONIN SCALIA &

---

[3] We note that on July 28, 2017, the U.S. Court of Appeals ruled that EPA's consideration of demand-side factors under the inadequate domestic supply prong of the general waiver authority was improper, and remanded the rule back to EPA for further consideration. *See Americans for Clean Energy v. EPA,* 864 F.3d 691 (D.C. Cir. 2017). EPA will respond to that remand in a separate action.

[4] *See, e.g.*, ''A Preliminary Assessment of RIN Market Dynamics, RIN Prices, and Their Effects,'' Dallas Burkholder, Office of Transportation and Air Quality, US EPA. May 14, 2015, EPA Air Docket EPA–HQ–OAR–2015–0111; *see also* "Denial of Petitions for Rulemaking to Change the RFS Point of Obligation," available in docket EPA-HQ-OAR-2016-0544.

[5] Section 211(a), which does exist and authorizes the Administrator to regulate the sale of fuels or fuel additives, is neither part of the RFS program and nor part of either public law that enacted the RFS. A review of the impacts of the Administrator's Section 211(a) authority to regulate fuel or fuel additives would not appear to facilitate the "appropriate adjustment" of the RFS volume requirements or to otherwise further the goal of the RFS program. It therefore is improbable that Congress mistakenly intended to refer to subsection (a). For this and other reasons described below, EPA declines to rewrite the statutory reference to "subsection (a)(2)" to refer to "subsection (a)."

BRYAN A. GARNER, READING LAW: THE INTERPRETATION OF LEGAL TEXTS 134 (2012);[6] *accord EPA v. EME Homer City Generation*, L.P., 134 S. Ct. 1584, 1613 (2014) (Scalia, J., dissenting) ("There are sometimes statutes which no rule or canon of interpretation can make effective or applicable to the situations of fact which they purport to govern. In such cases the statute must simply fail." (citing 3 R. POUND, JURISPRUDENCE 493 (1959))).[7]

EPA recognizes that in some cases agencies may avoid the literal construction of a statute by applying the scrivener's error doctrine to rewrite an erroneous cross-reference. To do so, however, requires "an extraordinarily convincing justification," such as where the "cross-reference[] as written point[s] in one direction, all the other evidence from the statute points the other way." *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1041 (D.C. Cir. 2001). Here, there is no such extraordinarily convincing justification. Construing the text literally does not undermine any other statutory provision because no other provision references this text. *Cf. id.* at 1041-43 (applying the scrivener's error doctrine because the literal meaning "makes no sense of" two other statutory sections). Nor does a literal construction enact a fundamental revision to a statutory program that "is impossible to accept." *Id.* at 1042. Indeed, while Section 211(o)(11)(C) describes periodic reviews that may inform the adjustment of the statutory applicable volumes, completing the periodic review is not a legal precedent to the exercise of EPA's authorities to adjust the volumes. *See, e.g.*, Section 211(o)(7), (o)(2)(B)(ii). There is also no obviously correct rewriting of "subsection (a)(2)"; even assuming that it refers to some statutory requirement of the RFS program, there are numerous such requirements for which EPA could sensibly analyze the impacts.[8] In sum, there is no "overwhelming evidence from the structure, language, and subject matter" of the statute pointing in a single direction warranting application of the scrivener's error doctrine. *United States Nat'l Bank v. Indep. Ins. Agents of Am.*, 508 U.S. 439, 462 (1993).

The legislative history does not compel a different result. As a general matter, while legislative history may help resolve statutory ambiguities, the history cannot rewrite an unambiguous statutory provision. *See Exxon Mobil Corp. v. Allapattah Servs., Inc.*, 545 U.S. 546, 568 (2005). EPA is unaware of any recent federal case applying the scrivener's error doctrine based solely on legislative history. *Cf. Shannon v. United States*, 512 U.S. 573, 584 (1994) ("courts have no authority to enforce [a] principle gleaned solely from legislative history that has no statutory reference point").

---

[6] This treatise on statutory interpretation is a persuasive authority in the courts. *See, e.g.*, *Tex. Dep't of Hous. & Cmty. Affairs v. Inclusive Cmtys. Project, Inc.*, 135 S. Ct. 2507, 2539 (2015) (citing the treatise); *S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41, 61 (D.C. Cir. 2014) (same).

[7] *See also United States v. Matchett*, 837 F.3d 1118, 1128 (11th Cir. 2016) (Pryor, J., statement respecting denial of rehearing en banc); *Awa v. Guam Mem'l Hosp. Auth.*, 726 F.2d 594, 598 (9th Cir. 1984); *State ex rel. Brnovich v. City of Tucson*, 399 P.3d 663, 685-86 (Ariz. 2017) (Gould J., concurring in part and in the result) (collecting numerous state law authorities). This result also follows from the canon that when statutory language is unintelligible without reference to a repealed act, the language is inoperative. *See* 1A SUTHERLAND STATUTORY CONSTRUCTION § 22:3 n.6 (7th ed.) (collecting authorities). Here, the language is *a fortiori* inoperative because it is unintelligible without reference to a nonexistent provision.

[8] EPA could, for instance, analyze the impacts of the statutory volume targets, Section 211(o)(2)(B)(i), the percentage requirements, Section 211(o)(3)(B), the point of obligation, Section 211(o)(3)(B)(ii)(I), the credit program, Section 211(o)(5), the limitations imposed by the definition of renewable biomass, Section 211(o)(1)(I), and so forth.

But even assuming that in the abstract, unambiguous legislative history could rescue otherwise unintelligible statutory text, the history here does not avail. While committee reports are especially valuable, *see Zuber v. Allen*, 396 U.S. 168, 186 (1969), EPA is unaware of any committee report language directly addressing this issue. Indeed, the sole relevant legislative history EPA is aware of is language in an earlier version of the bill that eventually resulted in Section 211(o)(11)(C). In that bill, the relevant language (that now refers to "subsection (a)(2)") referred to earlier versions of the RFS volume requirements. See H.R. 6, 110th Cong. 29 (as passed by the Senate, June 21, 2007) ("Public Print").[9]

Arguably, this suggests that we rewrite the "subsection (a)(2)" reference to instead refer to the RFS volume requirements. But that suggestion is ultimately unacceptable for at least two independent reasons. First, the applicable volumes contained in those earlier versions are significantly different from those contained in the version that became law (what is now codified at CAA section 211(o)(2)(B)). For instance, comparing the Public Print and the law as passed, Congress specified applicable volumes for different years and different types of fuel, with different numerical values for the same years, and different considerations for EPA to assess in resetting the volume requirements.[10] Thus, were EPA to faithfully implement the text of the earlier bill, for purposes of the periodic review, the agency would then analyze the impacts of provisions that did not pass and that are significantly different from the provisions that passed into law. We do not believe that this would be consistent with Congressional intent as embodied in the enacted bill.

Second, rewriting Section 211(o)(11) to refer to the statutory volume target tables that did pass would likewise be inappropriate. It would require the agency to rewrite an existing law by splicing in one piece of the earlier, failed bill into the bill that ultimately became EISA, based solely on the language of that failed bill and no other statutory evidence. EPA declines to take such a radical step. The agency generally does not rely on failed bills to divine the meaning of enacted legislation, much less to rewrite enacted legislation. *See Caraco Pharmaceutical Laboratories, Ltd. v. Novo Nordisk A/S*, 132 S.Ct. 1670, 1686 (2012). EPA's obligation — and the obligation of reviewing courts — is to apply the text of the statute as it is written, not to rescue the Congress from its drafting errors. *Lamie v. U.S. Tr.*, 540 U.S. 526, 542 (2004).

For these reasons, EPA construes the statutory reference to "subsection (a)(2)" literally as written, and therefore finds Section 211(o)(11)(C) unintelligible and inoperative.

2. Impacts of the RFS Volume Requirements on Refineries, Blenders, Distributors, and Importers; as well as on Consumers of Transportation Fuel

As noted above, the cross-reference to paragraph (a)(2) does not exist. Notwithstanding this textual difficulty, EPA recognizes the canon of construction that presumes giving effect to every statutory provision. *See, e.g.*, *Bennett v. Spear*, 520 U.S. 154, 173 (1997) ("It is the

[9] Later versions of the bill, like the final law, refer to a nonexistent provision. *See* H.R. 6, 110th Cong. 29 (as passed by the House, Dec. 6, 2007); *id.* (as passed by the Senate, Dec. 13, 2007).
[10] *Compare* Public Print 14-15, *with* Section 211(o)(2)(B)(i)-(iv).

cardinal principle of statutory construction that it is our duty to give effect, if possible, to every clause and word of a statute…."). On balance, EPA believes that this canon is outweighed by the other canons described above, so that the plain meaning of Section 211(o)(11)(C) is a nullity. *See Chickasaw Nation v. United States*, 534 U.S. 84, 94 (2001) (individual "canons are not mandatory rules" but rather "are guides that need not be conclusive"). Nonetheless, should our legal premise be faulty, we also consider what meaning we would give to Section 211(o)(11)(C) were it operative. *Cf. United States v. Ross*, 848 F.3d 1129, 1134 (D.C. Cir. 2017) ("Where a statute grants an agency discretion but the agency erroneously believes it is bound to a specific decision, we can't uphold the result as an exercise of the discretion that the agency disavows. (citing *Prill v. NLRB*, 755 F.2d 941, 947-48 (D.C. Cir. 1985))).

Thus, assuming that this provision is operative, EPA would construe Subparagraph (C) as directing EPA to review the impacts of the RFS volume requirements on refineries, blenders, distributors, and importers; as well as on consumers of transportation fuel. That is, we would construe "the requirements described in subsection (a)(2)" as referring to the volume requirements in CAA 211(o)(2)(B). And we would construe "each individual and entity described in paragraph (2)" to mean "refineries, blenders, distributors, and importers," CAA 211(o)(2)(A)(iii)(I), and consumers of transportation fuel, CAA 211(o)(2)(B)(ii)(V); *cf. also* CAA 211(o)(2)(A)(iv).

We begin with our construction of "the requirements described in subsection (a)(2)." Assuming for purposes of this construction only that the cross-reference is operative, the unintelligible statutory text still does not and cannot plainly address *which* requirements EPA is supposed to assess. This ambiguity allows EPA to adopt any reasonable construction. We reasonably construe it to refer to the volume requirements in CAA 211(o)(2)(B). Our reading is supported by the context and structure of the statute. The context indicates that the purpose of the periodic review is "[t]o allow for the appropriate adjustment of the requirements described in subparagraph (B) of paragraph (2)," that is the volume requirements described in CAA 211(o)(2)(B). To allow for the appropriate adjustment of the volume requirements, it is obviously reasonable to assess the impacts of those same requirements. For similar reasons, this reading is also reasonable in light of the overall statutory structure. Congress gave EPA authority to waive and reset the statutory volume targets, as well as to set the applicable volumes in years for which the statute the statute only specifies a minimum volume (for biomass-based diesel, BBD) or does not specify any volume at all . See CAA 211(o)(7), (o)(2)(B)(ii). To inform the exercise of these authorities in deciding whether and to what extent to adjust the statutory volumes, it is reasonable to consider the impacts of the same volumes.

These reasons suffice to warrant our reading of Subparagraph (C) of paragraph 211(o)(11). In addition, we note that our reading is consistent with the legislative history described above — indicating that in a prior version of the bill that became EISA, this cross-reference referred to the statutory volume targets included in that bill.

We now construe the reference to "each individual and entity described in paragraph (2)." We begin by defining "individual" and "entity." "Individual" ordinarily refers to natural persons. *See Mohamad v. Palestinian Auth.*, 566 U.S. 449 (2012). "Entity" typically "refers to an organization, rather than an individual" natural person, *Samantar v. Yousuf*, 560 U.S. 305, 315

(2010), and includes corporations, companies, associations, firms, partnerships, societies, joint stock companies, and so forth. *See Mohamad,* 566 U.S. at 454-55. Taken together, these readings give different meaning to the two different terms ("individual" and "entity"). *See Loughrin v. United States*, 134 S.Ct. 2384, 2390 (2014) (noting that every word of the statute should, where possible, be given some operative effect). They are also well supported by the larger context of how these terms are used throughout the EISA bill,[11] and the larger U.S. Code. *See Mohamad*, 566 U.S. at 454-55.

The cross-reference to "paragraph (2)" naturally refers to Section 211(o)(2).[12] This section includes a list of regulated individuals and entities ("refineries, blenders, distributors, and importers," CAA 211(o)(2)(A)(iii)(I)) as well as consumers of transportation fuel, CAA 211(o)(2)(B)(ii)(V); *cf. also* CAA 211(o)(2)(A)(iv). EPA construes the statute to refer to these individuals and entities. Assessment of the impacts of the RFS volume requirements on refineries, blenders, distributors, and importers, as well as on consumers of transportation fuel, may reasonably inform the "appropriate adjustment" of the volume requirements.

We note that CAA 211(o)(2) includes stray references to other individuals or entities as well. Nevertheless, we believe it is implausible that Congress intended EPA to review the impact of the RFS on every single individual or entity which happens to be described somewhere in this portion of the U.S. Code. Beyond the individuals and entities described above, the other references appear nonsensical. For instance, the very first individual or entity to which the statute refers is the Administrator of the EPA. CAA 211(o)(2)(A)(i). Likewise, the paragraph refers to the Secretary of Energy and the Secretary of Agriculture. CAA 211(o)(2)(B)(ii). However, it is not clear how or why EPA would conduct an analysis of regulatory impacts on the head of this agency or of other federal departments. Indeed, we are unaware of ever before having done an analysis of regulatory impacts on an agency head. Nor do we believe that such an impacts analysis would inform the "appropriate adjustment" of the volume requirements or otherwise further the intent of Congress.[13] Applying this cross-reference as written would therefore appear nonsensical, and we decline to do so.

---

[11] For example, EISA appears to use these two words with similar meaning in EISA section 203(a)(5) (requiring the National Academy of Sciences, in conducting a study of RFS impacts, to seek the participation and consider the input of "individuals and entities interested in issues relating to conservation, the environment, and nutrition"); EISA section 423 (requiring the government to "carry out public outreach to inform individuals and entities of the information and services available governmentwide"); EISA section 654 (adding 42 U.S.C. 16396(f)(3), which describes an eligible "individual or entity" as respectively referring to citizens and legal permanent residents, and entities incorporated and maintaining a primary place of business in the United States).

[12] EPA notes that, in a prior version of the bill that became EISA, this cross-reference referred to an entirely different list of individuals and entities. See Public Print section 111(j)(6)(A)(iii) (referring to Public Print section 111(j)(2)). (That list was included as part of the EISA bill, albeit with substantial revisions. The list, however, was not added in to the CAA as an amendment). We are not aware of any statutory evidence indicating whether Congress intentionally superseded the reference to the earlier list with the existing reference to CAA 211(o)(2). In any event, since the text of the enacted phrase ("each individual and entity described in paragraph (2)") is at least partially sensible, the enacted text controls. *See Hamer v. Neighborhood Housing Servs.*, -- U.S. --, No. 16-658, Slip Op. 7-8 (2017) ("we resist speculating whether Congress acted inadvertently," and rather "presume more modestly instead that the legislature says what it means and means what it says" (internal formatting omitted)).

[13] CAA 211(o)(2)(A)(i) also includes the phrase "new facilities that commence construction after the date of enactment of this sentence [December 19, 2007]," as part of the requirement for EPA to establish regulations to ensure that transportation fuel contains at least the applicable volumes of renewable fuel. We do not believe that this

II. Fulfillment of the Obligation to Conduct Periodic Reviews

The following three subsections describe the periodic reviews we have conducted for the three prongs set forth in CAA 211(o)(11): existing technologies, the feasibility of achieving compliance with the requirements, and the impacts of the requirements described in subsection (a)(2) on each individual and entity described in paragraph (2). In past years, we have conducted such periodic reviews, and made them publicly available through rulemakings published in the *Federal Register* and in supporting documents, as well as through non-rulemaking actions associated with the RFS program. Notwithstanding that we have not until today explicitly labeled these as "periodic reviews," they nevertheless satisfy the requirements of Section 211(o)(11).

A. Existing Technologies

In compliance with CAA 211(o)(11)(A), we have conducted periodic reviews of existing technologies in several contexts. The first was conducted as part of the RFS1 final rulemaking published on May 1, 2007,[14] and a more comprehensive review was conducted as part of the RFS2 final rulemaking published on March 26, 2010.[15] In the RFS2 rulemaking, we reviewed a full array of technologies throughout the full supply chain system. This review included technology for producing renewable feedstocks and renewable fuels (Section IV.B of that rulemaking) and technology for distributing, blending, dispensing, and consuming renewable fuel (Section IV.C). In subsequent rulemakings, including those in which we set the applicable annual standards, we reviewed updated and new data on advances in various technologies.[16] For instance, in the rulemaking that established the 2017 annual standards, we reviewed technology associated with cellulosic biofuel production (Section III.B) and infrastructure to produce and dispense higher-level ethanol blends (Section V.B.1).[17] In 2014, in light of developments in technology, we approved a pathway for cellulosic biofuel using biogas as a feedstock.[18] In a

---

passing reference can sensibly be understood to impose a requirement for EPA to evaluate the impact of the RFS volume requirements on these biofuel production facilities (and no others). Had Congress wanted EPA to conduct periodic reviews for "renewable fuel production facilities," it could easily have used that phrase or a similar phrase like "biofuel production facilities," particularly in the extensive list of subjects for analysis in section 211(o)(2)(B)(ii). *Cf.* CAA 211(o)(2)(B)(ii)(V) (referring to "consumers of transportation fuel"). Moreover, it is not clear why Congress would want EPA to study the impacts on only the new facilities that commenced construction after the date of EISA's enactment. The purpose of the periodic reviews is to facilitate EPA's "appropriate adjustment" of the volume requirements in CAA 211(o)(2)(B), but our adjustment occurs on a fuel category basis, *see, e.g.*, CAA 211(o)(7)(D) (authorizing EPA to adjust volumes of cellulosic, advanced, and BBD biofuels), and not according to when facilities were built. Furthermore, the purpose of the statutory distinction between "new facilities that commence construction after the date of enactment of this sentence" and other facilities was to establish grandfathering provisions relating to the RFS lifecycle GHG performance thresholds at the start of the program — not EPA's authority to make subsequent adjustments of volume requirements.

[14] 72 FR 23900.

[15] 75 FR 14670. *See also* the associated Regulatory Impact Analysis (EPA-420-R-10-006, February 2010), Chapter 1.

[16] *See, e.g.,* 75 FR 76790, 77 FR 1320, 77 FR 59458, 78 FR 49794, 80 FR 77420.

[17] 81 FR 89746.

[18] 79 FR 42128.

proposed rulemaking to implement other aspects of the RFS program, we have reviewed existing technologies for producing biointermediates and for generating Renewable Identification Numbers (RINs) for renewable electricity.[19]

Finally, we have also reviewed and considered existing technologies in a number of non-rulemaking contexts. In the context of reviewing petitions for new RIN-generating pathways submitted through §80.1416 and the Efficient Producer petition process, we have evaluated numerous technologies for converting renewable biomass into qualifying renewable fuel.[20] We have also reviewed technologies for separating recyclable material from municipal solid waste in the context of waste separation plans required under §80.1426(f)(5).[21]

B. Feasibility of Achieving Compliance with the Requirements

In compliance with CAA 211(o)(11)(B), we have conducted periodic reviews of the feasibility of achieving compliance with the requirements of the RFS program primarily in the context of rulemakings which establish the applicable annual standards. For purposes of this component of the periodic review, EPA has focused on the feasibility of achieving compliance with the annual percentage standards for the market as a whole, and has provided impacts on individuals and entities in the next section.

In the RFS2 final rulemaking, we reviewed the feasibility of achieving compliance with the statutory volume targets for 2010, concluding that meeting the volume target for cellulosic biofuel was not feasible but that meeting the other three volume targets were feasible (Section II.E.1.b). In subsequent rulemakings to set the applicable annual standards, we also reviewed the feasibility of achieving compliance with the statutory volume targets in the context of determining whether and to what degree to employ the waiver authorities. For instance, in the rulemaking to set the 2012 standards we again concluded that the statutory volume target for cellulosic biofuel was not feasible, but that there was no need to waive the advanced biofuel or total renewable fuel standards because those standards could be met (Section II.B).[22] In the rulemaking to set the 2013 standards, we evaluated whether the total renewable fuel and advanced biofuel standards could be met, and concluded that compliance could be achieved through the use of carryover RINs.[23]

However, in the rulemakings setting the applicable standards for 2014-2016, 2017, and 2018, we concluded that none of the statutory volume targets for cellulosic biofuel, advanced biofuel, and total renewable fuels were feasible based on a review of existing production and distribution technologies and infrastructure.[24] In the context of the 2018 final rule, we evaluated all of the waiver authorities provided in 211(o)(7) to determine whether additional reductions

---

[19] 81 FR 80828.
[20] "Completed pathway assessments," available in docket EPA-HQ-OAR-2017-0627.
[21] *See, e.g.*, "Decision Document - Approval of Fiberight Municipal Solid Waste Separation Plan," June 2012. Available in docket EPA-HQ-OAR-2017-0627.
[22] 77 FR 1320; *see also* 75 FR 76790 (annual rule establishing the 2011 standards).
[23] 78 FR 49794.
[24] 80 FR 77420, 81 FR 89746.

were justified beyond those achieved using the cellulosic waiver authority. The waiver authorities are designed to address different elements of feasibility, including supply, economic or environmental harm, and significant price increases for BBD. EPA concluded that waiver of the volume requirements beyond reductions under the cellulosic waiver authority were not warranted.[25]

Our reviews of the feasibility of achieving compliance with the requirements of the RFS program in these rulemakings have typically included considerations of such factors as the availability of qualifying feedstocks and the potential for feedstock switching, domestic renewable fuel production capacity, potential for imports of renewable fuel, an assessment of the E10 blendwall and opportunities for use of higher ethanol blends such as E15 and E85, the size and utility of the carryover RIN bank, and costs. EPA also evaluates the feasibility of achieving compliance with the requirements of the RFS program in setting the BBD standards for years after 2012. CAA 211(o)(2)(B)(ii) directs that EPA shall set the standards based on a review of implementation of the program and consideration of a number of factors, including the expected rate of production of renewable fuels, and the sufficiency of infrastructure to deliver and use renewable fuel. EPA has done this evaluation to establish the BBD standards for 2013-2019.[26]

EPA has also evaluated the feasibility of achieving compliance with the requirements of the RFS program in the context of requests for waivers of the statutory volume targets under CAA 211(o)(7). EPA received and responded to a request from the Governor of Texas to waive the 2008 and 2009 standards, which EPA evaluated and found was not warranted.[27] EPA received and responded to requests to waive the RFS standards in 2012 from the Governors of several states.[28] EPA also received requests for waivers of the 2014 standard and evaluated these requests, finding that to the extent that EPA's own action in waiving the volumes satisfies the requests, they were moot, and denying the request for any additional reductions.[29] EPA has received and responded to requests to waive the RFS standards as recently as January of 2017 for the 2016 cellulosic biofuel standard.[30]

Based on these considerations and our assessment of the feasibility of achieving compliance with the requirements of the RFS program, we have fulfilled the requirement to conduct a periodic review consistent with subparagraph (B) of 211(o)(11).

C. Impacts of the Volume Targets on Refineries, Blenders, Distributors and Importers; and Consumers of Transportation Fuel

---

[25] *See* "Renewable Fuel Standards Program: Standards for 2018 and Biomass-Based Diesel Volume for 2019," available at Docket ID No. EPA-HQ-OAR-2017-0091.
[26] *See* 75 FR 76790, 77 FR 1320, 77 FR 59458, 78 FR 49794, 80 FR 77420.
[27] 73 FR 47168.
[28] See 77 FR 70752.
[29] 80 FR 77420, 77429.
[30] Denial of AFPM Petition for Waiver of 2016 Cellulosic Biofuel Standard, January 17, 2017, available at: https://www.epa.gov/sites/production/files/2017-01/documents/afpm-rfs-petition-decision-ltr-2017-01-17.pdf. EPA has also received a waiver request from Pennsylvania (November 2, 2017) to which EPA will respond in a separate action.

Because the statutory language of Subparagraph (C) is unintelligible, it is inoperative. But if we assume the provision is operative as described in Section I.B.2 above, we would construe the statute as directing EPA to review the impacts of the RFS volume targets in CAA 211(o)(2) on certain regulated entities (specifically refineries, blenders, distributors, and importers) and consumers of transportation fuel. In this context, actions on several fronts fulfill the obligation to conduct periodic reviews in compliance Subparagraph (C) of 211(o)(11).

In the 2010 rulemaking which instituted the RFS2 program, we evaluated the impacts of the program on regulated small entities in the context of the small producer exemption (Section III.C) and exemptions for small refineries and small refiners (Section III.E). We also conducted an analysis of small entities that may be subject to the RFS2 program and presented the analysis in a Report of the Small Business Advocacy Review Panel.[31] In addition, we evaluated the impacts of the program on all regulated entities in the context of the 20% RIN rollover cap (Section III.D), in establishing Information Collection Requests, and in evaluating impacts on consumers of transportation fuel through our assessment of costs (Section VII).[32]

Under CAA section 211(o)(9), small refineries may, on a case-by-case basis, petition EPA for an extension of their exemption beyond the December 31, 2010 automatic exemption provided by the statute. EPA may approve such petitions if it finds that "disproportionate economic hardship" exists.[33] These evaluations are facility-specific and include considerations of each facility's unique structural and economic circumstances in light of the specific standards from which they are seeking an exemption.

In 2012 we received a waiver request from several States. In the context of evaluating and responding to that request, we evaluated impacts of the program on ethanol production and use, feed prices, and fuel prices.[34] Implicit in this evaluation were impacts on refiners and importers of petroleum fuels, blenders, fuel distributers, ethanol producers, farmers, and consumers.

The annual rulemakings that establish the applicable standards for each compliance year have included an evaluation of the impacts on regulated parties of those standards in the context of our assessment of whether the standards are feasible and appropriate. These evaluations have included the ability of refineries to blend ethanol into their gasoline or, in lieu of such blending, purchase RINs on the open RIN market.[35] These rulemakings have also included an evaluation of impacts on consumers of transportation fuel in the estimation of illustrative costs of the

---

[31] Available in the docket EPA-HQ-OAR-2005-0161.

[32] Beyond impacts on refineries, blenders, distributors and importers, we also evaluated the impacts on renewable fuel production facilities in the context of the ethanol production facility grandfathering provisions of Section 210 of the Energy Independence and Security Act of 2007 (Section II.B.3), and conducted an assessment of biofuel distribution, blending, and dispensing (Sections IV.C and IV.D).

[33] At the current time, EPA estimates that there are 38 refineries eligible for RFS small refinery hardship relief. For 2013, EPA evaluated 16 petitions. For 2014, EPA evaluated 12 petitions. For 2015, EPA evaluated 14 petitions. For 2016, EPA evaluated 16 petitions.

[34] "Response to 2012 waiver request," available in docket EPA-HQ-OAR-2017-0627.

[35] While this is not required by Section 211(o)(11)(C), we have also evaluated the impacts of the BBD and advanced biofuel standards on biodiesel producers.

standards.[36] In the rulemakings which established the 2014-2016 standards and the 2017 standards, we evaluated the impact of RIN values on regulated parties to determine whether and to what degree those values were passed through from producers and importers of renewable fuel to retail consumers.[37] In the annual rulemakings, EPA has also evaluated the impacts of the standards on small entities.[38]

Finally, in our response to several petitions to reconsider or initiate a rulemaking to modify the point of obligation, codified at 40 CFR 80.1405, we evaluated the comparative impact of the point of obligation on affected parties. Many petitioners suggested that the current point of obligation was harming merchant and small refiners, as well as other parties such as small retailers, and that it was unfairly benefiting non-obligated parties who nonetheless blended and acquired RINs. Before responding to the petitions, EPA closely examined the impact of the current program on refiners and other market participants, and the impact that could be expected from moving the "point of obligation." After review and consideration of comments received on a proposed denial to change the point of obligation, EPA denied these petitions for rulemaking and reconsideration. EPA found that the current regulations do not appear to disproportionately harm merchant or small refiners, nor do they harm small retailers or provide windfall profits to unobligated blenders. Additionally, EPA found that the current "point of obligation" is appropriate, and that changes proposed by petitioners could result in significant disruption in the fuels marketplace and would be unlikely to result in additional renewable fuel being used.[39] Within the denial, EPA also evaluated the contention that the current point of obligation was increasing fuel prices for consumers.[40]

---

[36] *See, e.g.*, 81 FR 89746 (Section V.D).
[37] 80 FR 77420, 81 FR 89746.
[38] *See, e.g.*, 80 FR 77420 (Section IX.C.), "Screening Analysis for the Final Renewable Fuel Standard Program Renewable Volume Obligations for 2017," memorandum to the docket EPA-HQ-OAR-2016-004.
[39] *See* "Denial of Petitions for Rulemaking to Change the RFS Point of Obligation," available in docket EPA-HQ-OAR-2016-0544, November 22, 2017.
[40] *See* "Denial of Petitions for Rulemaking to Change the RFS Point of Obligation," available in docket EPA-HQ-OAR-2016-0544, November 22, 2017.

Message

From: Sutton, Tia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=25E87403F63143ACBB959446512A372C-SUTTON, TIA]
Sent: 7/5/2018 1:25:38 PM
To: LaRue, Steven [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ae0438503e444d7583eaec7fb573df03-Larue, Steve]; Burch, Julia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=27b0cd43b0404bab89aef0c8d08c165f-Burch, Julia]
CC: Walters, Margaret [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=406f74d8f760452cb40e0a9d25c95c3b-Walters, Margaret]; Wolfe, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1e7f57a806d7482a9296da8928448691-MWOLFE]; Siegel, Kelly C. [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=97b21b6e4a854c96b6418bf492f43fa6-KSiegel]
Subject: RE: Small Refinery Waivers

See previous email chain on this last time Ed asked about this. (Or just give me a ring when you get a chance.)

From: LaRue, Steven
Sent: Thursday, July 05, 2018 7:14 AM
To: Sutton, Tia <sutton.tia@epa.gov>; Burch, Julia <Burch.Julia@epa.gov>
Cc: Walters, Margaret <Walters.Margaret@epa.gov>; Wolfe, Michael <Wolfe.Michael@epa.gov>; Siegel, Kelly C. <Siegel.KellyC@epa.gov>
Subject: FW: Small Refinery Waivers

Hi Tia and Julia,

SAC minority staff asking about the small refinery waivers below - have we had any instances occur that would have warranted prior notice?

Let us know what you think, thanks.

Steve

From: Walsh, Ed
Sent: Tuesday, July 3, 2018 5:40 PM
To: LaRue, Steven <LaRue.Steven@epa.gov>; Hanson, Paige (Catherine) <hanson.catherine@epa.gov>; Wolfe, Michael <Wolfe.Michael@epa.gov>; Walters, Margaret <Walters.Margaret@epa.gov>
Subject: Fwd: Small Refinery Waivers

Got this from Melissa tonight. Can we talk about it after the holiday.

Thanks

Ed

Begin forwarded message:

> **From:** "Zimmerman, Melissa (Appropriations)" <Melissa_Zimmerman@appro.senate.gov>
> **Date:** July 3, 2018 at 4:15:36 PM EDT
> **To:** "Walsh, Ed" <Walsh.Ed@epa.gov>
> **Subject: Small Refinery Waivers**

Hi Ed,
I'm checking in about the required reporting below from the FY17 Senate Report. I don't recall ever receiving any reports on such waivers. Did I miss something? Could you check for me?

Thanks!
Melissa

Small Refinery Relief- Congress directed the Agency, in consultation with the Department of Energy [DOE], to grant hardship relief to small refineries if compliance with the Renewable Fuel Standard [RFS] would impose a disproportionate economic hardship. In response to several recent petitions, the Agency determined that compliance with the RFS would have a disproportionate economic impact on a small refinery, but denied hardship relief because the small refinery remained profitable notwithstanding the disproportionate economic impact. This is inconsistent with congressional intent because the statute does not contemplate that a small refinery would only be able to obtain an exemption by showing that the RFS program threatens its viability. Congress explicitly authorized the Agency to grant small refinery hardship relief to ensure that small refineries remain both competitive and profitable. In the intensely competitive transportation fuels market, small entities cannot remain competitive and profitable if they face disproportionate structural or economic metrics such as limitations on access to capital, lack of other business lines, disproportionate production of diesel fuel, or other site specific factors identified in DOE's original 2011 Small Refinery Exemption Study prepared for Congress.

When making decisions about small refinery exemptions under the RFS program, the Agency is directed to follow DOE's recommendations which are to be based on the original 2011 Small Refinery Exemption Study prepared for Congress and the conference report to division D of the Consolidated Appropriations Act of 2016. Should the Administrator disagree with a waiver recommendation from the Secretary of Energy, either to approve or deny, the Agency shall provide a report to the Committee on Appropriations and to the Secretary of Energy that explains the Agency position. Such report shall be provided 10 days prior to issuing a decision on a waiver petition.

Melissa Zimmerman
Clerk, Subcommittee on the Legislative Branch
Professional Staff, Subcommittee on Interior & Environment
Committee on Appropriations
United States Senate
(202) 224-9722

Message

From: Sutton, Tia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=25E87403F63143ACBB959446512A372C-SUTTON, TIA]
Sent: 4/3/2018 7:01:33 PM
To: Wolfe, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=1e7f57a806d7482a9296da8928448691-MWOLFE]
CC: Walters, Margaret [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=406f74d8f760452cb40e0a9d25c95c3b-Walters, Margaret]; LaRue, Steven [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ae0438503e444d7583eaec7fb573df03-Larue, Steve]
Subject: RE: Small Refinery Relief reporting requirement - OCFO status request

Hi Mike,
I would recommend talking to Mandy and/or Josh on this one.

Thanks!
-Tia

From: Wolfe, Michael
Sent: Tuesday, April 03, 2018 11:49 AM
To: Sutton, Tia <sutton.tia@epa.gov>
Cc: Walters, Margaret <Walters.Margaret@epa.gov>; LaRue, Steven <LaRue.Steven@epa.gov>
Subject: Small Refinery Relief reporting requirement - OCFO status request

Hi Tia,

OCFO (as they periodically do) is requesting that we provide any status changes, as applicable, on our FY 2017 reporting requirements. Attached below is the previous update we provided for the small refinery relief requirement ("Has not been triggered"). Based on our last discussion, I am unaware of any changes that would need to be made to this status. Can you please verify that this is accurate or provide a new update for the "Update as of 3/30/2018" field in OCFO's tracking sheet? If possible, OCFO is looking to get a response by COB Thursday.

Thanks for your help,
Mike

Report Heading	Office	Language	Due to Congress	Previous Update	Update as of 3/30/2018
Small Refinery Relief	OAR	When making decisions about small refinery exemptions under the RFS program, the Agency is directed to follow DOE's recommendations which are to be based on the original 2011 Small Refinery Exemption Study prepared for Congress and the conference report to division D of the Consolidated Appropriations Act of 2016. Should the Administrator disagree with a waiver recommendation from the Secretary of Energy, either to approve or deny, the Agency shall provide a report to the Committee on Appropriations and to the Secretary of Energy that explains the Agency position. Such report shall be provided 10 days prior to issuing a decision on a waiver petition.	Provided 10 Days Prior to Issuing a Decision on a Waiver Petition.	Has not been triggered	

Message

From: Sutton, Tia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=25E87403F63143ACBB959446512A372C-SUTTON, TIA]
Sent: 8/1/2018 8:46:10 PM
To: Hengst, Benjamin [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c414e2bf04a246bb987d88498eefff06-Hengst, Benjamin]
Subject: RE: Follow-up from EPW hearing - SRE

And to think you doubted my question... ☺ I'm sending a revised note in a sec to the crew.

From: Hengst, Benjamin
Sent: Wednesday, August 01, 2018 4:44 PM
To: Sutton, Tia <sutton.tia@epa.gov>
Subject: RE: Follow-up from EPW hearing - SRE

So that was fast.

From: Sutton, Tia
Sent: Wednesday, August 1, 2018 4:43 PM
To: Hengst, Benjamin <Hengst.Benjamin@epa.gov>
Subject: FW: Follow-up from EPW hearing - SRE

From: Hamilton, Sabrina
Sent: Wednesday, August 01, 2018 4:36 PM
To: Meekins, Tanya <Meekins.Tanya@epa.gov>; Sutton, Tia <sutton.tia@epa.gov>; Lubetsky, Jonathan <Lubetsky.Jonathan@epa.gov>; Mroz, Jessica <mroz.jessica@epa.gov>; Jefferson, Catrice <Jefferson.Catrice@epa.gov>
Cc: Carroll, Maria <carroll.maria@epa.gov>; Mims, Kathy <Mims.Kathy@epa.gov>; Eades, Cassaundra <Eades.Cassaundra@epa.gov>; Thundiyil, Karen <Thundiyil.Karen@epa.gov>; Davis, Matthew <Davis.Matthew@epa.gov>; Haman, Patricia <Haman.Patricia@epa.gov>
Subject: FW: Follow-up from EPW hearing - SRE

FYI...

Bill signed the attached letter to Senator Rounds today. Maria will carrying hardcopy to OCIR for closure under OAR-18-000-9669.

Sabrina Hamilton

Sabrina Hamilton
Air and Radiation Liaison Specialist
and FOIA Coordinator
Office of Air and Radiation
U.S. Environmental Protection Agency (EPA)
1200 Pennsylvania Avenue, N.W. (6101-A)
Washington, D.C. 20460
Tel: (202) 564-1083

From: Thundiyil, Karen
Sent: Wednesday, August 1, 2018 4:04 PM
To: joe_bliss@rounds.senate.gov
Subject: Follow-up from EPW hearing - SRE

Hi Joe,

Following up on today's EPW hearing, here is more information on the small refinery exemption program from Assistant Administrator, William L. Wehrum. Please let me know if you have any questions.

Karen.

Karen Thundiyil
Office of Congressional Affairs
U.S. Environmental Protection Agency
(202) 564.1142

Message

From: Sutton, Tia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=25E87403F63143ACBB959446512A372C-SUTTON, TIA]
Sent: 2/26/2018 10:16:09 PM
To: OAR Briefings [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2da922b09b7a4a18a19571005bff0297-OAR Briefin]
CC: Hengst, Benjamin [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c414e2bf04a246bb987d88498eefff06-Hengst, Benjamin]; Burch, Julia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=27b0cd43b0404bab89aef0c8d08c165f-Burch, Julia]
Subject: RE: Briefing Materials for Bill for tomorrow
Attachments: Briefing for AA_Fuels Compliance 101_February 2018.pptx

Importance: High

Attached is an updated copy of the Fuels Implementation and Compliance slides that I emailed earlier.

From: Sutton, Tia
Sent: Monday, February 26, 2018 4:12 PM
To: OAR Briefings <OAR_Briefings@epa.gov>
Cc: Hengst, Benjamin <Hengst.Benjamin@epa.gov>; Burch, Julia <Burch.Julia@epa.gov>
Subject: Briefing Materials for Bill for tomorrow

Hi all,
Attached are materials for the following briefings with Bill tomorrow in Ann Arbor:

- 10:15am: 2019 RVO Topics (PowerPoint slides); and 2017 Waiver Implementation (Word document "One Pager on 2017 Waiver Implementation")
- 11:00am: RFS RIN Economics, continued (PowerPoint slides)
- 12:00pm: Working lunch: Fuels Implementation and Compliance (non-RFS) 101 (PowerPoint slides); and Gasoline Sulfur Compliance Report (PowerPoint slides + draft of the Report itself, if Bill would like to read it)
- 1:30pm: Introduction to the Fuels Streamlining project (PowerPoint slides)
- 2:15pm: Butamax Fuel Registration (PowerPoint slides + draft of the FR Notice, if Bill would like to read it)
- 3:15pm: 2016 Remand Rule (PowerPoint slides)

Thank you!
-Tia

Message

From: Sutton, Tia [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=25E87403F63143ACBB959446512A372C-SUTTON, TIA]
Sent: 2/26/2018 9:10:22 PM
To: OAR Briefings [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2da922b09b7a4a18a19571005bff0297-OAR Briefin]
CC: Hengst, Benjamin [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=c414e2bf04a246bb987d88498eefff06-Hengst, Benjamin]; Burch, Julia [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=27b0cd43b0404bab89aef0c8d08c165f-Burch, Julia]
Subject: Briefing Materials for Bill for tomorrow
Attachments: RFS 2019 Annual Rule for Wehrum part 2.pptx; RIN Economics Briefing for Bill W Final.pptx; Briefing for AA_Fuels Compliance 101_February 2018.pptx; Gasoline Sulfur Compliance Report_January 2018 (Final Draft).docx; Gasoline Sulfur Report Briefing for Bill Wehrum_Final_2-27-18.pptx; 2-27-18 Bill Wehrum Streamlining Briefing v4.pptx; Butamax Briefing for Bill Wehrum_Final_2-27-18.pptx; Butamax FR Notice_Final_8-18-17.docx; 2016 Remand with Wehrum Feb 27 FINAL.PPTX; One Pager on 2017 Waiver Implementation.docx

Hi all,
Attached are materials for the following briefings with Bill tomorrow in Ann Arbor:

- 10:15am: 2019 RVO Topics (PowerPoint slides); and 2017 Waiver Implementation (Word document "One Pager on 2017 Waiver Implementation")
- 11:00am: RFS RIN Economics, continued (PowerPoint slides)
- 12:00pm: Working lunch: Fuels Implementation and Compliance (non-RFS) 101 (PowerPoint slides); and Gasoline Sulfur Compliance Report (PowerPoint slides + draft of the Report itself, if Bill would like to read it)
- 1:30pm: Introduction to the Fuels Streamlining project (PowerPoint slides)
- 2:15pm: Butamax Fuel Registration (PowerPoint slides + draft of the FR Notice, if Bill would like to read it)
- 3:15pm: 2016 Remand Rule (PowerPoint slides)

Thank you!
-Tia

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

August 7, 2018

OFFICE OF
AIR AND RADIATION

The Honorable Rodney Davis
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Davis:

Thank you for your letter of April 26, 2018, to the U.S. Environmental Protection Agency (EPA), regarding small refinery exemptions (SREs) granted to certain obligated parties under the Renewable Fuel Standard (RFS) program.

Congress established SREs, recognizing that small refineries may, in some cases, require hardship exemptions under the RFS program. Section 211(o)(9) of the Clean Air Act (CAA) authorizes the Administrator to temporarily exempt small refineries from their renewable fuel volume obligations under the RFS program on the basis of a finding of "disproportionate economic hardship." The statute directs EPA, in consultation with the Department of Energy (DOE), to consider the DOE Small Refinery Study and "other economic factors" in evaluating SRE petitions. Over the past several years, working in close consultation with DOE, EPA has implemented the SRE provisions of the CAA. We appreciate that the SREs granted over the past several months have been the focus of many stakeholders' attention, but we are required by statute to implement these provisions and we will continue to manage the program consistent with the law.

Your letter also requested information related to those small refineries granted exemptions in 2015, 2016, 2017, and 2018. EPA is unable to provide information that is fully responsive to your request as we treat both the names of individual petitioners and EPA's decision on those petitions as Confidential Business Information (CBI). See 40 C.F.R. part 2, subpart B, Confidentiality of Business Information (specifying the requirements for protecting information for which a claim of business confidentiality has been made and the procedures for resolving a claim and protecting or disclosing information). However, we can share the following aggregated information regarding SREs for the years you've requested:

- For the 2015 compliance year, we received 15 petitions from small refineries. We granted exemptions for 7 of those, with a total exempted renewable fuel volume obligation of 292.5 million RINs. We denied 6 petitions. One petitioner was determined to be ineligible.
- For the 2016 compliance year, we received 20 petitions from small refineries. We granted exemptions for 19 of those, with a total exempted renewable fuel volume obligation of 790 million RINs. We denied 1 petition.

- For the 2017 compliance year, we have received 34 petitions from small refineries. To date, we have granted exemptions for 29 of those, with a total exempted renewable fuel volume obligation of 1.46 billion RINs. We are still processing the remaining 5 petitions for hardship exemptions for the 2017 compliance year.
- To date, we have received 2 petitions for the 2018 compliance year.

EPA appreciates the importance of the RFS program to stakeholders across the country, including farmers, producers, and obligated parties like refiners and importers. As such, we are interested in ensuring the program is implemented in a fair and effective manner. We look forward to working with you and your colleagues as we continue to look for opportunities to improve the operation of the program.

Again, thank you for your letter. If you have further questions, please contact me or your staff may contact Karen Thundiyil in the EPA's Office of Congressional and Intergovernmental Relations at thundiyil.karen@epa.gov or 202-564-1142.

Sincerely,

William L. Wehrum
Assistant Administrator

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

August 7, 2018

OFFICE OF
AIR AND RADIATION

The Honorable Collin C. Peterson
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Peterson:

Thank you for your letter of April 26, 2018, to the U.S. Environmental Protection Agency (EPA), regarding small refinery exemptions (SREs) granted to certain obligated parties under the Renewable Fuel Standard (RFS) program.

Congress established SREs, recognizing that small refineries may, in some cases, require hardship exemptions under the RFS program. Section 211(o)(9) of the Clean Air Act (CAA) authorizes the Administrator to temporarily exempt small refineries from their renewable fuel volume obligations under the RFS program on the basis of a finding of "disproportionate economic hardship." The statute directs EPA, in consultation with the Department of Energy (DOE), to consider the DOE Small Refinery Study and "other economic factors" in evaluating SRE petitions. Over the past several years, working in close consultation with DOE, EPA has implemented the SRE provisions of the CAA. We appreciate that the SREs granted over the past several months have been the focus of many stakeholders' attention, but we are required by statute to implement these provisions and we will continue to manage the program consistent with the law.

Your letter also requested information related to those small refineries granted exemptions in 2015, 2016, 2017, and 2018. EPA is unable to provide information that is fully responsive to your request as we treat both the names of individual petitioners and EPA's decision on those petitions as Confidential Business Information (CBI). See 40 C.F.R. part 2, subpart B, Confidentiality of Business Information (specifying the requirements for protecting information for which a claim of business confidentiality has been made and the procedures for resolving a claim and protecting or disclosing information). However, we can share the following aggregated information regarding SREs for the years you've requested:

- For the 2015 compliance year, we received 15 petitions from small refineries. We granted exemptions for 7 of those, with a total exempted renewable fuel volume obligation of 292.5 million RINs. We denied 6 petitions. One petitioner was determined to be ineligible.
- For the 2016 compliance year, we received 20 petitions from small refineries. We granted exemptions for 19 of those, with a total exempted renewable fuel volume obligation of 790 million RINs. We denied 1 petition.

- For the 2017 compliance year, we have received 34 petitions from small refineries. To date, we have granted exemptions for 29 of those, with a total exempted renewable fuel volume obligation of 1.46 billion RINs. We are still processing the remaining 5 petitions for hardship exemptions for the 2017 compliance year.
- To date, we have received 2 petitions for the 2018 compliance year.

EPA appreciates the importance of the RFS program to stakeholders across the country, including farmers, producers, and obligated parties like refiners and importers. As such, we are interested in ensuring the program is implemented in a fair and effective manner. We look forward to working with you and your colleagues as we continue to look for opportunities to improve the operation of the program.

Again, thank you for your letter. If you have further questions, please contact me or your staff may contact Karen Thundiyil in the EPA's Office of Congressional and Intergovernmental Relations at thundiyil.karen@epa.gov or 202-564-1142.

Sincerely,

William L. Wehrum
Assistant Administrator

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

August 7, 2018

OFFICE OF
AIR AND RADIATION

The Honorable Kristi Noem
U.S. House of Representatives
Washington, D.C. 20515

Dear Congresswoman Noem:

Thank you for your letter of April 26, 2018, to the U.S. Environmental Protection Agency (EPA), regarding small refinery exemptions (SREs) granted to certain obligated parties under the Renewable Fuel Standard (RFS) program.

Congress established SREs, recognizing that small refineries may, in some cases, require hardship exemptions under the RFS program. Section 211(o)(9) of the Clean Air Act (CAA) authorizes the Administrator to temporarily exempt small refineries from their renewable fuel volume obligations under the RFS program on the basis of a finding of "disproportionate economic hardship." The statute directs EPA, in consultation with the Department of Energy (DOE), to consider the DOE Small Refinery Study and "other economic factors" in evaluating SRE petitions. Over the past several years, working in close consultation with DOE, EPA has implemented the SRE provisions of the CAA. We appreciate that the SREs granted over the past several months have been the focus of many stakeholders' attention, but we are required by statute to implement these provisions and we will continue to manage the program consistent with the law.

Your letter also requested information related to those small refineries granted exemptions in 2015, 2016, 2017, and 2018. EPA is unable to provide information that is fully responsive to your request as we treat both the names of individual petitioners and EPA's decision on those petitions as Confidential Business Information (CBI). See 40 C.F.R. part 2, subpart B, Confidentiality of Business Information (specifying the requirements for protecting information for which a claim of business confidentiality has been made and the procedures for resolving a claim and protecting or disclosing information). However, we can share the following aggregated information regarding SREs for the years you've requested:

- For the 2015 compliance year, we received 15 petitions from small refineries. We granted exemptions for 7 of those, with a total exempted renewable fuel volume obligation of 292.5 million RINs. We denied 6 petitions. One petitioner was determined to be ineligible.
- For the 2016 compliance year, we received 20 petitions from small refineries. We granted exemptions for 19 of those, with a total exempted renewable fuel volume obligation of 790 million RINs. We denied 1 petition.

- For the 2017 compliance year, we have received 34 petitions from small refineries. To date, we have granted exemptions for 29 of those, with a total exempted renewable fuel volume obligation of 1.46 billion RINs. We are still processing the remaining 5 petitions for hardship exemptions for the 2017 compliance year.
- To date, we have received 2 petitions for the 2018 compliance year.

EPA appreciates the importance of the RFS program to stakeholders across the country, including farmers, producers, and obligated parties like refiners and importers. As such, we are interested in ensuring the program is implemented in a fair and effective manner. We look forward to working with you and your colleagues as we continue to look for opportunities to improve the operation of the program.

Again, thank you for your letter. If you have further questions, please contact me or your staff may contact Karen Thundiyil in the EPA's Office of Congressional and Intergovernmental Relations at thundiyil.karen@epa.gov or 202-564-1142.

Sincerely,

William L. Wehrum
Assistant Administrator

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

August 7, 2018

OFFICE OF
AIR AND RADIATION

The Honorable Dave Loebsack
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Loebsack:

Thank you for your letter of April 26, 2018, to the U.S. Environmental Protection Agency (EPA), regarding small refinery exemptions (SREs) granted to certain obligated parties under the Renewable Fuel Standard (RFS) program.

Congress established SREs, recognizing that small refineries may, in some cases, require hardship exemptions under the RFS program. Section 211(o)(9) of the Clean Air Act (CAA) authorizes the Administrator to temporarily exempt small refineries from their renewable fuel volume obligations under the RFS program on the basis of a finding of "disproportionate economic hardship." The statute directs EPA, in consultation with the Department of Energy (DOE), to consider the DOE Small Refinery Study and "other economic factors" in evaluating SRE petitions. Over the past several years, working in close consultation with DOE, EPA has implemented the SRE provisions of the CAA. We appreciate that the SREs granted over the past several months have been the focus of many stakeholders' attention, but we are required by statute to implement these provisions and we will continue to manage the program consistent with the law.

Your letter also requested information related to those small refineries granted exemptions in 2015, 2016, 2017, and 2018. EPA is unable to provide information that is fully responsive to your request as we treat both the names of individual petitioners and EPA's decision on those petitions as Confidential Business Information (CBI). See 40 C.F.R. part 2, subpart B, Confidentiality of Business Information (specifying the requirements for protecting information for which a claim of business confidentiality has been made and the procedures for resolving a claim and protecting or disclosing information). However, we can share the following aggregated information regarding SREs for the years you've requested:

- For the 2015 compliance year, we received 15 petitions from small refineries. We granted exemptions for 7 of those, with a total exempted renewable fuel volume obligation of 292.5 million RINs. We denied 6 petitions. One petitioner was determined to be ineligible.
- For the 2016 compliance year, we received 20 petitions from small refineries. We granted exemptions for 19 of those, with a total exempted renewable fuel volume obligation of 790 million RINs. We denied 1 petition.
- For the 2017 compliance year, we have received 34 petitions from small refineries. To date, we have granted exemptions for 29 of those, with a total exempted renewable fuel volume

obligation of 1.46 billion RINs. We are still processing the remaining 5 petitions for hardship exemptions for the 2017 compliance year.

- To date, we have received 2 petitions for the 2018 compliance year.

EPA appreciates the importance of the RFS program to stakeholders across the country, including farmers, producers, and obligated parties like refiners and importers. As such, we are interested in ensuring the program is implemented in a fair and effective manner. We look forward to working with you and your colleagues as we continue to look for opportunities to improve the operation of the program.

Again, thank you for your letter. If you have further questions, please contact me or your staff may contact Karen Thundiyil in the EPA's Office of Congressional and Intergovernmental Relations at thundiyil.karen@epa.gov or 202-564-1142.

Sincerely,

William L. Wehrum
Assistant Administrator

To: Wehrum, Bill
From: postmaster@usda.gov
Sent: Fri 4/6/2018 10:15:53 PM
Subject: Undeliverable: RFS Information
RFS Information

Delivery has failed to these recipients or groups:

steve.censky@osec.usda.gov (steve.censky@osec.usda.gov)
The address you sent your message to wasn't found at the destination domain. It might be misspelled or it might not exist. Try to fix the problem by doing one or more of the following:

1. Send the message again, but before you do, delete and retype the address. If your email program automatically suggests an address to use, don't select it.
2. Clear the recipient AutoComplete cache in your email program by following the steps in this article: Status code 5.1.10. Then resend the message, but before you do, be sure to delete and retype the address.
3. Contact the recipient by some other means (by phone, for example) to confirm you're using the right address. Ask them if they've set up an email forwarding rule that could be forwarding your message to an incorrect address.

Diagnostic information for administrators:

Generating server: usda.gov

steve.censky@osec.usda.gov
Remote Server returned '550 5.1.10 RESOLVER.ADR.RecipientNotFound; Recipient steve.censky@osec.usda.gov not found by SMTP address lookup'

Original message headers:

```
Received: from SN1PR0203CA001.001f.mgd2.msft.net (23.103.6.78) by
 CY1F00106MB0197.001f.mgd2.msft.net (23.103.20.215) with Microsoft SMTP Server
 (version=TLS1_2, cipher=TLS_RSA_WITH_AES_256_CBC_SHA) id 15.20.609.13; Fri, 6
 Apr 2018 22:15:52 +0000
Received: from GCC01-DM2-obe.outbound.protection.outlook.com (23.103.198.54)
 by mail.usda.gov (23.103.6.78) with Microsoft SMTP Server id 15.20.609.13 via
 Frontend Transport; Fri, 6 Apr 2018 22:15:47 +0000
Received: from (unknown [23.103.198.54]) by DOAGTICWASDC01-avms-02c-01mb-ews.usda.gov with smtp
          id 0161_2f46_0e0e3b1a_39e8_11e8_8194_3c4a92f03c38;
         Fri, 06 Apr 2018 22:15:46 +0000
Received: from MWHPR09CA0035.namprd09.prod.outlook.com (2603:10b6:300:6d::21)
 by MWHPR09MB1471.namprd09.prod.outlook.com (2603:10b6:300:74::21) with
 Microsoft SMTP Server (version=TLS1_2,
 cipher=TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384_P256) id 15.20.653.12; Fri, 6
 Apr 2018 22:15:45 +0000
Received: from DM2GCC01FT005.eop-gcc01.prod.protection.outlook.com
 (2a01:111:f400:7d01::204) by MWHPR09CA0035.outlook.office365.com
 (2603:10b6:300:6d::21) with Microsoft SMTP Server (version=TLS1_2,
 cipher=TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384) id 15.20.653.12 via Frontend
 Transport; Fri, 6 Apr 2018 22:15:45 +0000
Authentication-Results: spf=pass (sender IP is 23.103.201.95)
 smtp.mailfrom=epa.gov; osec.usda.gov; dkim=pass (signature was verified)
 header.d=usepa.onmicrosoft.com;osec.usda.gov; dmarc=permerror action=none
```

header.from=epa.gov;
Received-SPF: Pass (protection.outlook.com: domain of epa.gov designates
23.103.201.95 as permitted sender) receiver=protection.outlook.com;
client-ip=23.103.201.95; helo=GCC01-DM2-obe.outbound.protection.outlook.com;
Received: from GCC01-DM2-obe.outbound.protection.outlook.com (23.103.201.95)
by DM2GCC01FT005.mail.protection.outlook.com (10.97.3.0) with Microsoft SMTP
Server (version=TLS1_2, cipher=TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384_P256) id
15.20.653.13 via Frontend Transport; Fri, 6 Apr 2018 22:15:44 +0000
DKIM-Signature: v=1; a=rsa-sha256; c=relaxed/relaxed; d=usepa.onmicrosoft.com;
s=selector1-epa-gov;
h=From:Date:Subject:Message-ID:Content-Type:MIME-Version;
bh=TLXBtijzkSUiNXpiOkEb+9VH1TnFmO+5yv8AtB8H5ys=;

b=biFb2SipjLPDPbithzkP9BxLZlcDGgZzKfNN09d0XUmeniFCdHwegSltXYBBNI/0RzQXJEAuiztA7q8f8cQL14Ye/jzdJ7zZNdRKe
PQ1Q9kBhYGRflBZJHJ+Lq2uv8JVOeOIK9jFM6PtwIQ/D35voV8oLCTh3/DqU6sBZD7hdBI=
Received: from BL2PR09MB1011.namprd09.prod.outlook.com (10.167.102.18) by
DM5PR09MB1210.namprd09.prod.outlook.com (10.172.33.148) with Microsoft SMTP
Server (version=TLS1_2, cipher=TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384_P256) id
15.20.653.12; Fri, 6 Apr 2018 22:15:43 +0000
Received: from BL2PR09MB1011.namprd09.prod.outlook.com
([fe80::4a7:a25a:d164:9041]) by BL2PR09MB1011.namprd09.prod.outlook.com
([fe80::4a7:a25a:d164:9041%3]) with mapi id 15.20.0653.012; Fri, 6 Apr 2018
22:15:43 +0000
From: "Wehrum, Bill" <Wehrum.Bill@epa.gov>
To: "steve.censky@osec.usda.gov" <steve.censky@osec.usda.gov>
CC: "Gunasekara, Mandy" <Gunasekara.Mandy@epa.gov>, "Beach, Allie - OSEC,
Washington, DC" <Allison.Beach@osec.usda.gov>
Subject: RFS Information
Thread-Topic: RFS Information
Thread-Index: AdPN86ioACf31juARtO0rfejzU1ECw==
Date: Fri, 6 Apr 2018 22:15:43 +0000
Message-ID: <BL2PR09MB10115897880A09A449657098EBBA0@BL2PR09MB1011.namprd09.prod.outlook.com>
Accept-Language: en-US
Content-Language: en-US
X-MS-Has-Attach:
X-MS-TNEF-Correlator:
Authentication-Results-Original: spf=none (sender IP is)
smtp.mailfrom=Wehrum.Bill@epa.gov;
x-originating-ip: [161.80.106.173]
x-ms-publictraffictype: Email
X-Microsoft-Exchange-Diagnostics-untrusted:
1;DM5PR09MB1210;7:jD8TjYCBVIcJ2ec2+HpRHIpuvmSitXjv8Y7LsiJmHR0eDp8UTa2DNRueMv4qclsYRtwePVeViVPAlSwNnK0NG
JMG7kTHXY45a0MQI/fj7Uy6kqo162HrOB6e9zOgFOg8/hxfd+ixWVcNHy2rbwyAdT4ikqO8I87TNhU7Wf5pyWrYoLO5EarKZS+vov7+
uQGBSu+H9oUEk5cCZ41u3Db9aN++13jZM5shb2hbp7ssMd4zKMSAjxJqm9RI4ty08Y+/
x-ms-exchange-antispam-srfa-diagnostics: SOS;SOR;
X-Forefront-Antispam-Report-Untrusted: SFV:SKI;SCL:-
1;SFV:NSPM;SFS:(10019020)(346002)(39380400002)(39860400002)(366004)(396003)(376002)(199004)(189003)(257
86009)(99286004)(6116002)(316002)(478600001)(450100002)(4326008)(2900100001)(33656002)(68736007)(549060
03)(55016002)(2906002)(8666007)(6436002)(9686003)(54896002)(5640700003)(6306002)(53936002)(102836004)(2
501003)(106356001)(3660700001)(97736004)(3480700004)(6916009)(8936002)(81166006)(2351001)(5250100002)(1
86003)(26005)(3280700002)(105586002)(7736002)(86362001)(790700001)(3846002)(81156014)(14454004)(8676002
)(6506007)(72206003)(5660300001)(66066001)(74316002)(59450400001)(221733001)(7116003)(476003)(486006)(7
696005);DIR:OUT;SFP:1102;SCL:1;SRVR:DM5PR09MB1210;H:BL2PR09MB1011.namprd09.prod.outlook.com;FPR:;SPF:No
ne;LANG:en;PTR:InfoNoRecords;A:1;MX:1;
X-MS-Office365-Filtering-Correlation-Id: 8cfe3a3a-769f-4180-4031-08d59c0bf153
X-Microsoft-Antispam-Untrusted:
UriScan:;BCL:0;PCL:0;RULEID:(7020095)(4652020)(4534165)(4627221)(201703031133081)(201702281549075)(5600
026)(4604075)(3008032)(2017052603328)(7153060)(7193020);SRVR:DM5PR09MB1210;
X-MS-TrafficTypeDiagnostic: DM5PR09MB1210:|MWHPR09MB1471:|CY1F00106MB0197:
x-microsoft-antispam-prvs:
<DM5PR09MB121004EEAC203D47B2A112D3EBBA0@DM5PR09MB1210.namprd09.prod.outlook.com>
x-exchange-antispam-report-test:
UriScan:(28532068793085)(278428928389397)(21748063052155);UriScan:(28532068793085)(278428928389397)(217
48063052155);
x-exchange-antispam-report-cfa-test:
BCL:0;PCL:0;RULEID:(6040522)(2401047)(5005006)(8121501046)(3002001)(93006095)(93001095)(10201501046)(32
31221)(944501327)(52105095)(6041310)(20161123558120)(20161123562045)(20161123564045)(20161123560045)(20
1703131423095)(201702281528075)(20161123555045)(201703061421075)(201703061406153)(6072148)(201708071742
011);SRVR:DM5PR09MB1210;BCL:0;PCL:0;RULEID:;SRVR:DM5PR09MB1210;BCL:0;PCL:0;RULEID:(2401047)(8121501046)
(1430347)(1431041)(1432103)(1551027)(9101536074)(10201501046)(3002001)(93006095)(93004095)(3231221)(902
075)(913088)(7045084)(944500087)(944510158)(944921075)(946801075)(946901075)(52103095)(52104095)(521050
95)(52106095)(52401095)(52601095)(52505095)(52406095)(1610001)(9300000070)(9301000091)(8301001075)(8301

003183)(201708071742011);SRVR:MWHPR09MB1471;BCL:0;PCL:0;RULEID:;SRVR:MWHPR09MB1471;
x-forefront-prvs: 0634F37BFF
received-spf: None (protection.outlook.com: epa.gov does not designate
 permitted sender hosts)
X-Microsoft-Antispam-Message-Info-Original:
ZxInla5fYrk6CnvxRekAgLR2dXXZsXCJH8jvrVJ3M2T0+VllT3x1kbUJ//S4WCYbB8UxzNPngb0ZAohtKEtQXzNMgGtTY+4aglKXwa7
VkKSY9S8NomtJwZEL2WTO3LJiC15q6ZHBkiBmBSSw/xDqTgIcoANgs+ChEWJdDyucu3DzkfEbeR6b5z6YF7v3eHTO5g2xYMO8AcADMy
PSciXBOHbpPHABRy3XiF06Oa/gEbPKfJPxBg78fP9Q/q6MWdLjD2BlkkwzmnfEzyucDKOiEd4AItVDfTW2vi2mbafydt2VA2Z4ptrdw
e/m/xudfiEsjWd7hahP6o/+6dfiQl2qsViNENOwvAdWa5yb3/8VqGKj2HiWjyqmPYqoSiHn6w73G4XFM4cLznsWO6+5F4Y8VyJNxS4x
DClPXeP+rxXpnEA=
SpamDiagnosticOutput: 1:99
SpamDiagnosticMetadata: NSPM
Content-Type: multipart/alternative;
	boundary="_000_BL2PR09MB10115897880A09A449657098EBBA0BL2PR09MB1011namp_"
MIME-Version: 1.0
X-MS-Exchange-Transport-CrossTenantHeadersStamped: DM5PR09MB1210
Return-Path: Wehrum.Bill@epa.gov
X-EOPAttributedMessage: 0
X-EOPTenantAttributedMessage: ed5b36e7-01ee-4ebc-867e-e03cfa0d4697:0
X-MS-Exchange-Transport-CrossTenantHeadersStripped: DM2GCC01FT005.eop-gcc01.prod.protection.outlook.com
X-MS-Exchange-Transport-CrossTenantHeadersPromoted: DM2GCC01FT005.eop-gcc01.prod.protection.outlook.com
X-Forefront-Antispam-Report:
CIP:23.103.201.95;IPV:NLI;CTRY:;EFV:NLI;SFV:NSPM;SFS:(8046002)(2980300002)(438002)(3190300001)(199004)(
189003)(59450400001)(55016002)(8666007)(9686003)(5640700003)(6306002)(54896002)(6436002)(61614004)(1028
36004)(26005)(6916009)(86362001)(2501003)(15003)(5250100002)(2900100001)(476003)(8636004)(260700001)(12
6002)(5660300001)(7116003)(54906003)(2351001)(99286004)(8676002)(72206003)(7736002)(7636002)(74316002)(
221733001)(14454004)(16586007)(4326008)(66066001)(246002)(25786009)(33656002)(106002)(6506007)(34807000
04)(6116002)(790700001)(84326002)(336012)(3846002)(106466001)(356003)(486006)(1096003)(7696005);DIR:INB
;SFP:;SCL:1;SRVR:MWHPR09MB1471;H:GCC01-DM2-
obe.outbound.protection.outlook.com;FPR:;SPF:Pass;LANG:en;PTR:mail-
dm2gcc01on0095.outbound.protection.outlook.com;A:1;MX:1;
X-Microsoft-Exchange-Diagnostics:
1;DM2GCC01FT005;1:yy1KWPK9UkzLnSZf5ArbxZQ4+QndFEOUQHeqJos6b7kvMXZSMqv26e6TfuUB/63HIMAperkCxiUPNahWEfIPN
fYpuHCOQktZNp8zaQDMsgHVYvyPMG3fya5Fets0u7yf
X-Microsoft-Antispam:
UriScan:;BCL:0;PCL:0;RULEID:(7020095)(5600026)(4604075)(4605076)(1401123)(8001031)(1416026)(71702078)(7
193020);SRVR:MWHPR09MB1471;
X-Microsoft-Exchange-Diagnostics:
1;MWHPR09MB1471;3:6vxotIpNWRUM9CNdGjwOBrcs98D6pxk2mAjdnCIRG+RDmKKjb80bRhTTRvjN3AKYXo07Wj7arZCY/sfE35Dgb
56Nec3RZXQjMvtymN2ceZaID0Yy6t/bWt3KCU3LXyja7CBEUHMn1Qa9gXYasd5mUXaeDSWB4PNiOxyVOQ1ZirVA7lpQ5nsaMTPzGryM
YH8X+vg9Y9ZkyeqvVQrPnQWt+fkPZyueuHPEWKcbkZVxFfEPEErPlUt+GzU6Ks92h4WIv4ZLDWqRJNxTbM+FeON3beidTQNX8RNQUZy
ES3mZ2dbL/sAsge0e6By84dWEfPpL/WrqACx1769+ql9ipgrJ+g==;25:BQaNwaCTfzsrk7U6Z1XgvH9ITR+nsjXEen1I3CGbMU4Sgf
eU9H1fqIO7mwgrkpJRUVlyfpRpptk4ZOqHBlzl4WIHPBc1pLHUjv8C8SlZrqNN7uGPXS17Igh5STG0dArCYsc8XZ1+Ucb2ARs2bFQgE
CnTKOZeBlY8wWcJWroZ2k7CeXVamNpRTEU61nsZhRudyPUIY8ywKtagfIk4dw1cu8LtVrhIWopDcHw6MZwf5/EejBe3xDL0BYhA5WVA
uZo+EN/CYszcsIj/vnKQjRHDveZ2/I+EcxFRKRUlJEiwABaqbwE+XWn/BAPzk55TEFd74yc5onNSjH4m3ULmUd+eTw==;31:7ILVaCL
8tFyFI420CwjFQhXrm/yepy9r86qcRdZ0ZC89Z63RvWmAL/YZu2Ycc9cgoGc1PifA7IW7kLXcL8hgkEpHInoBJjtgl8QwmEziueNmH/
TAh/UfUn3cdxGZ60rPvTyNFuR5SCUZ1I3Y7U1fPX7GqPSGWioF/n+xUlIKinP5w1Y49mAgU/NfnxpHAJy8tPtx1tpXrHaEB2taUhcMz
eIMVxEnlguU9Q5tIyBrUno=
X-LD-Processed: ed5b36e7-01ee-4ebc-867e-e03cfa0d4697,ExtAddr
X-Microsoft-Exchange-Diagnostics:
1;MWHPR09MB1471;20:z5xiKg+Cln1ht7pddINRMf6QoWaNjWt2fVQ/vlH2nWN9J6yG6jnZhs0qfccvJl4UxCcwhTp6sTDDhAKGV0Un
KH2gKy6h5L4HFNOyl1ydVsvstw33wEZq79x5IJ7wT4PRnaG4F/Ok0Rj3yHzyXV3qT0/zcQIgelqmmLaDZdyDSTvM/eItU8HgUiEjVQ4
+aC4PCRfoBNzqim+jXOYHrX51IimPosru57oR1gy8myJ6HITqPt4WlX5GmNKQCjMZTOu0Ic7aktwv8o0P04fbIXo0na/4+bc75JPum8
PRm7reRyoA8Zng/HFs9zF1OfkOxnNj3pfH/ghCWejm7AG+NcqO/qzVfT+gesHn9S9To1KPEK6Sn46DE/zqQnSapqy6xa+8wLNW5F0qq
57e/p7lpGiXfTryvsPaGpaeGPfeXNtgT51c0shYvrD/WTU9bXdi7vfiPeHnRpQ66XAYOCPdSQDucYv5FiNCwjJVE7g603cH/YKnjWHq
IQUsQI0A9Ds0a304;4:IGgAuYooE1WDYwVPpI9F/orYxkSJVfIbM+Kdr9FhFxDNoujcGUDWKFKRmhYAKIPcj8nkeqI+pKrF4fW/iwiD
jjFmobpZMeS0XyR+qV73/fru0LZz5vJN3pAUvCYRWioxyVdnhgUk88tmCWEHNGiSKOkMohjJxxCaA6Y1ePV9a46qlFzjRfQoCGFb/+o
zdbNgi3673BbeMw+XPqA8WcCq6mEYlICXgnG6He4zclnPBIwoiU6kRfzM1CUBZolSt0lvtD4kF2ovhK2NgvgvXGyZftmyVgpuT4cFBZ
on8REarwfF3Yvp1eHSjewehoXINXfSom04c8jJmi+nN6CRC1givItQzq0qiPwJqsX1jz8DOeSXsIoHndB3xHrDcY8Y4MWE
X-Microsoft-Exchange-Diagnostics: =?us-
ascii?Q?1;MWHPR09MB1471;23:Ox970W0cWNA6VO/FAEhTJXpoGFS4fA8S4TNsD6IU2?=
 =?us-ascii?Q?CZz1kDm1H0z1WZ8czCV8MsSEQrYXeMXHKN3RUnBh948M3NmlWMz6qDL49hnP?=
 =?us-ascii?Q?1YdkvoCx0xbUMBwcbCEfw7XkDnrRoEryffeYTL8EewKX0MIcPvBtrjduv42T?=
 =?us-ascii?Q?+O06qoBwjlBNjbcjAagNdO3RJDRfLbxSqGtPMSM6gnGAiylQ5BYAhVDWLddc?=
 =?us-ascii?Q?ocbMykTjpuS+wFBbuvNvtaHiv4bO1t1NlazoFa6FzBOXbt98QTMthBFXfDTc?=
 =?us-ascii?Q?T1m3o87tHxdUALiKRH1B52kXtbJErMfAHrnQI87J9CuQDxgQqZAeXwFEw2M8?=
 =?us-ascii?Q?kwlwzuKuXTR1NhrvsiMfuntf/SLgTSkw8a80XIRpdIAJRWvPjswxhQlCAu5T?=
 =?us-ascii?Q?v7o3L4bNQpLiQWfu4fTfr0X8SjeW3LR4PgY2TZPD7IyA90hb529Fl0/Mj3Fp?=
 =?us-ascii?Q?QJdGLOPz9uCp9cBoK3k8A6lG5UK8Ksxrrui4xPuLnp9rmY/9mz095Y6KmpyV?=
 =?us-ascii?Q?9Y05cg6zZZcVQ99rR8YSN9qwiWP9AUvfBGZ1TMmlRIYmjAWRbsMuwLVitMHP?=
 =?us-ascii?Q?xBGTFXx5v40+1Pm0Ql66p8Kgk3SPGoOWeatk2zta+dsyz8Ujbh9Ftks2B8wj?=
 =?us-ascii?Q?gAT1xnFAGgjJmxrFFbuPAtm93+yKEp6KDeDc+JcfIkOAeEdkteNnYnBQdikm?=

=?us-ascii?Q?wcWXDsM+7O65xCJjmcbXoNvG/kldiCs7P+qBpjhLlzrDgWXQdVWFn4wpZmZ+?=
=?us-ascii?Q?U9yTXOjeabJSDTXBpFK4I/HvDujlACmC9KERadJfZGPITEsuTaYQX7dLKW79?=
=?us-ascii?Q?GqSTePovtsY6++2YMxd7DSqaQhqrAutSQYcre4NmdBjRP/9jFe+dG+0a89Z/?=
=?us-ascii?Q?+8GMItp4l8rWQK9Pv54JrFLelokiUtE66Og+d2smu/uRI+AtV79VUlNZvQu+?=
=?us-ascii?Q?FcRvyfnCuX0p0mwhaBBPl/BNTVRLQ73ur+Sd2yM1/PTAdmrFZ3OkrvkL0XhX?=
=?us-ascii?Q?RI4udT/EZ3OdBQHIbc4wIFncMlfd9GsVN3/THM2XyySeet8NYlT6CHcPw3M9?=
=?us-ascii?Q?+aSnF8/DSDP1RrW05fvZzIRP9AtPAklaGW4IB1qR8lR3mkCsg2imetySfrxJ?=
=?us-ascii?Q?lwKjvUgQ2rrOmQsGe7sFE16ntMRpR/4Iu9UsvMRHCOa/o+l6opNqs7nT8pso?=
=?us-ascii?Q?Rl3EIiStTQ7hVQCdtJiEopxnUr5BWEqSb1hK+8DryQ8sR8L8eLCf7nf15WAK?=
=?us-ascii?Q?OGz4bmNdUCvWAnnRx6ezlAYhw790D7kg1H4SMQY1WBgWcT0GwrW0nmLyywnS?=
=?us-ascii?B?Zz09?=
X-Microsoft-Antispam-Message-Info:
AVwEqLB3kyNOcVOKoduPglIlHWoy7RlTJmNL4T/D/f/h8BPD02gGvHUQYehnnccA+/vwoJsy4VXy0Qu5fMV75OnH/Mux1O37tmKUxS7
YYUIozDE/ljKohlC0NgoFkEHRHhOEraT7OocYPpPbDbny2yGZFjbxtks36uaTwPdOReK3ClhaMTMnmH0i4Dqk5tKCvsUOJr/lPFDveT
q5ggkbkjpwcJtFi27J4M0Gw7TJ1IqOVXk8duXygBZ0Ljmd6mn0zE2oMb5vEAOOJeiQlWWsR6Zyig1WG6B4L+hsJBgd5Ulgnqj1ITY8y
Qq9Wau4Bp7M3qPlG9kyI4SJLM2gqRT8t0NwV4SpT+LJmzrVEPpghFoPx1KTDmOK/78g00wDRe3V
X-Microsoft-Exchange-Diagnostics:
1;MWHPR09MB1471;6:qmHsa2Mt+0x1/sAfZQkqwr1Dg5V5qlSdnxVJ2xc6Qu3koXhNAA673X82rI2Eexcp5x84skYzYi006rGQygQUG
ZpX4LP1hINsYgriQ5Ge5/WqJmd0M1cLCke87yJ1OYtPzjo2AmqPeGS08aTccnAtLz+Nn0wBd2AbeHqY5wzro7ieDQcmozR1tpntMei3
UzSSwjMcN5cXDhr9IGY6tBZ6iyOzqBy3MDi00Focez2hkszVldLqzJY616h/z8r99Qu+TFmI3hquGGET1+djwvoCX1BNSwqez1VNLP+
+d0bTQXk4mPNq8BWYxv2KbjQT6v+UTUGiIGPvV79sEH5MxUw3K0ndMPK1aLzU1PvhlBPlvVbx5m8iIifdiHgMp3NCC2flWlRpZadnJp
ooj1YQST1x8UuC2VjzGPK9TvNO1JFdAPn5C7o4ZFU+v8b/qRIRqsevoAVNcASc6w+JcfgMeK/crg==;5:CwCeQM07vZSf53yyV0iwVs
PJFuT0JPOGVbdQVw1kEM5AoZRmm46a0+36CTjmmCwQsSKyy4/e1EL3oYHX3yjlkHS2HqDkO1MHGKt6Zvf27oB3QeV6WNtMI9jMunM8s
+hoDhKw/E9d5AU4F7YX8NA6am9x7btRBQsoDfy4O72lt/U=;24:j+S2G1bepBHGM8hgi7UAk3hw6WzaoQfVFsfpO56l2RuD3vawdXE+
wygF/Dcmdha7JOwEN9HPlrAVtX3p7cF1dXsN7FU25GJmyYXbjYcizk4=
X-Microsoft-Exchange-Diagnostics:
1;MWHPR09MB1471;7:z9PQ4OGrKi3ws05+3wtUuKjIt4TUCtBEzdwAVkEaTHzND/y1Zcc/FY6joEaWqGPqGGH/+8EI0wihjl7XEh3aw
zUGitijOjL86d4xPgCfwWbcFWOndu4wIESMQjqE7vkYcMkqVIEZJk6Q9TyBavveDbybb1rOEHkfY/GROgu5+r7ZnXVanfyfKCnqqifj
5/w4zRW4B0v1hhQu/iWNYEGpDXyTJzNUIFW1qlRF7OuYOxfCMm75mJXBFOl68oG8sbhQ;20:WTj27jroPSNRT3o9qYXdUAxsOE8XWMk
BoLy0acfEqDM1fPGEKaoO72woXQiqyy/q7mld8t+HzC+l/4slA6vN+PeI8UBSkcvmv/TKEsThrX6bRc0hrsD4FHfrTSBj5ZbLdFe/AE
nBKIFKgpj0SJtwdvvMYDsyh5VXa5dcEMddc+A=
X-MS-Exchange-CrossTenant-OriginalArrivalTime: 06 Apr 2018 22:15:44.9350
(UTC)
X-MS-Exchange-CrossTenant-Network-Message-Id: 8cfe3a3a-769f-4180-4031-08d59c0bf153
X-MS-Exchange-CrossTenant-Id: ed5b36e7-01ee-4ebc-867e-e03cfa0d4697
X-MS-Exchange-CrossTenant-FromEntityHeader: Internet
X-MS-Exchange-Transport-CrossTenantHeadersStamped: MWHPR09MB1471

Message

From: Wehrum, Bill [Wehrum.Bill@epa.gov]
Sent: 4/6/2018 10:15:43 PM
To: steve.censky@osec.usda.gov
CC: Gunasekara, Mandy [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=53d1a3caa8bb4ebab8a2d28ca59b6f45-Gunasekara,]; Beach, Allie - OSEC, Washington, DC [Allison.Beach@osec.usda.gov]
Subject: RFS Information

Hi Steve. In response to your request for information about small refinery exemptions, Deliberative Process / Ex. 5

Deliberative Process / Ex. 5 For the 2016 compliance year, we received 20 petitions from small refineries. We granted exemptions for 19 of those, with a total exempted volume of 790 million gallons of renewable volume obligations. We denied 1 petition. Interestingly, D6 RIN prices during calendar 2017 ranged from about $0.40 to about $1.00, which is a good bit above transactional costs (which we think is in the neighborhood of 2 or 3 cents).

_____

Bill Wehrum
Assistant Administrator
Office of Air and Radiation
U.S. Environmental Protection Agency
(202) 564-7404

Message

From: Sopata, Joe [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=4C7F99B2B5594810B4F656C8450C1E0F-JSOPATA]
Sent: 1/3/2013 4:10:20 PM
To: Lindsay Fitzgerald [Fitzgerald.Lindsay@epa.gov]
CC: Weihrauch, John [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=74d426b7439045d9a0a65b186ea68b21-Jweihrau]; Suzanne Bessette [Bessette.SuzanneLNDU@usepa.onmicrosoft.com]
Subject: Re: Fw: downstream and exporter tech amendment review
Attachments: EO12866_Interagency Comments_RFS_Amendments_NPRM_2060-AR21 - 01_03_2012 jrs.docx

Thanks Lindsay. I made the changes suggested by Suzanne. **Deliberative Process / Ex. 5**

Deliberative Process / Ex. 5

Thanks again,
Joe Sopata
Chemist
USEPA/OAR/OTAQ/CD/FCC
Ph# 202-343-9034
email: sopata.joe@epa.gov

EO12866_Intera...
Comments_RFS...

From: Lindsay Fitzgerald/DC/USEPA/US

To: Joe Sopata/DC/USEPA/US@EPA
Cc: John Weihrauch/DC/USEPA/US@EPA, Suzanne Bessette/AA/USEPA/US@EPA
Date: 01/02/2013 10:55 AM
Subject: Fw: downstream and exporter tech amendment review

Joe-

Here are Suzanne's edits to incorporate.

Let us know if you have any questions.

I addressed her comment about **Deliberative Process / Ex. 5**

Lindsay
----- Forwarded by Lindsay Fitzgerald/DC/USEPA/US on 01/02/2013 10:54 AM -----

From: Suzanne Bessette/AA/USEPA/US

To: Lindsay Fitzgerald/DC/USEPA/US@EPA
Date: 12/21/2012 12:07 PM
Subject: Fw: downstream and exporter tech amendment review

Yup, here it is. Shouldn't take more than a few minutes to look through, I hope.

Suzanne F. Bessette
Attorney-Advisor
Compliance Division
Office of Transportation and Air Quality
U.S. Environmental Protection Agency
Tel: 734.214.4703
Fax: 734.214.4053
----- Forwarded by Suzanne Bessette/AA/USEPA/US on 12/21/2012 12:06 PM -----

From: Suzanne Bessette/AA/USEPA/US
To: Lindsay Fitzgerald/DC/USEPA/US@EPA
Cc: John Weihrauch/DC/USEPA/US@EPA, Mary Manners/AA/USEPA/US@EPA
Date: 12/20/2012 02:49 PM
Subject: downstream and exporter tech amendment review

Lindsay -
Joe Sopata sent the tech amendment out for review (I think you were on this email) and asked us to remove the parts that we imported into the RIN fraud rule. I did this in track changes and was hoping you could take a look to make sure I left in the right stuff and that there's nothing else in there we want to take out. I am 99.99% sure that this is all correct and consistent with our intent. I'll wait for your thumbs up to send to Joe. Thanks,
Suzanne.
[attachment "EO12866_Interagency Comments_RFS_Amendments_NPRM_2060-AR21 - 12_14_2012-OTAQAA.docx" deleted by Joe Sopata/DC/USEPA/US]

Suzanne F. Bessette
Attorney-Advisor
Compliance Division
Office of Transportation and Air Quality
U.S. Environmental Protection Agency
Tel: 734.214.4703
Fax: 734.214.4053

UNITED STATES COURT OF APPEALS
FOR THE EIGHTH CIRCUIT

Dakota Prairie Refining, LLC, Petitioner, v. United States Environmental Protection Agency, Respondent.	No. 16-2692

PETITION FOR REVIEW

Pursuant to Section 307(b)(1) of the Clean Air Act, 42 U.S.C. § 7607(b)(1) and Federal Rule of Appellate Procedure 15(a), Dakota Prairie Refining, LLC ("Dakota Prairie") hereby petitions the United States Court of Appeals for the Eighth Circuit for review of the final decision of the Environmental Protection Agency denying Dakota Prairie's request for a one-year small refinery exemption from the requirements of the Renewable Fuel Standard program for 2015, issued on April 14, 2016. A copy of this decision is attached as Appendix A.

The Corporate Disclosure Statement required by Federal Rule of Appellate Procedure 26.1 and Local Rule of the Eighth Circuit 26.1A is attached as Appendix B. The Certificate of Service and the list of parties served with this petition are attached as Appendix C.

DATED: June 10, 2016

PERKINS COIE LLP

By: _____

LeAnn M. Johnson (DC Bar No. 48640)
Albert M. Ferlo (DC Bar No. 290395)
PERKINS COIE LLP
700 13th Street, N.W.
Suite 600
Washington, D.C. 20005-3960
Telephone: 202.654.6209
Facsimile: 202.654-9943
LeAnnJohnson@perkinscoie.com
AFerlo@perkinscoie.com

Attorneys for Petitioner
Dakota Prairie Refining, LLC

APPENDIX A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 14 2016

OFFICE OF
AIR AND RADIATION

Mr. Tim Michelsen
Treasurer
Dakota Prairie Refining, LLC
P.O. Box 5601
Bismarck, North Dakota 58506-5601

Dear Mr. Michelsen:

I am writing in response to the petition from Dakota Prairie Refining, LLC (Dakota Prairie) for a one-year small refinery exemption from the requirements of the Renewable Fuel Standard (RFS) program for Dakota Prairie's refinery in Dickinson, North Dakota for 2015. Under the Clean Air Act (CAA) and its implementing regulations,[1] a small refinery may petition EPA to extend the exemption it previously received from its RFS obligations.[2] Pursuant to these provisions, Dakota Prairie submitted a petition to EPA on November 30, 2015, for an exemption from Dakota Prairie's RFS obligations for the 2015 compliance year.

While we appreciate the amount of information and analyses provided by Dakota Prairie in its petition, we have determined that Dakota Prairie is not eligible to petition for the small refinery exemption. EPA implemented the Energy Policy Act of 2005 (EPAct) to provide an automatic exemption through 2010 for facilities that satisfied the statutory 75,000 barrel per day average aggregate crude oil throughput limitation in calendar year 2004.[3] After enactment of the Energy Independence and Security Act of 2007 (EISA), EPA amended the regulations to also include as eligible for the temporary exemption those small refineries meeting the throughput limitation in 2006.[4] After that initial temporary exemption ended, Congress provided two mechanisms for "extending" the exemption for small refineries that had previously received the exemption.[5] Consistent with the plain language of the CAA and in furtherance of Congressional intent, EPA promulgated regulations that allow only small refineries that previously had received the initial exemption to qualify for an extension of that exemption.[6] Thus, EPA interprets and implements these provisions as only allowing those small refineries qualifying for the statutory temporary exemption as now eligible for an extension of that exemption. EPA believes this approach is not only consistent with the plain language of the statute and regulations, but also reflects the fact that

[1] CAA section 211(o)(9)(B); 40 CFR 80.1441(e)(2).
[2] *See* CAA section 211(o)(9)(A), 40 CFR 80.1441(a)(1) and (e)(1).
[3] 40 CFR 80.1141(a)(1); "Regulation of Fuels and Fuel Additives: Renewable Fuel Standard Program," 72 Fed. Reg. 23900, 23911, 23924 (May 1, 2007) ("RFS1").
[4] 40 CFR 80.1441(a)(1); "Regulation of Fuels and Fuel Additives: Changes to Renewable Fuel Standard Program; Final Rule," 75 Fed. Reg. 14670 (March 26, 2010) ("RFS2").
[5] *See* CAA section 211(o)(9)(A)(ii)(II) (specifying when the Administrator shall "extend the exemption under clause (i) for the small refinery"); 211(o)(9)(B)(i) ("a small refinery may…petition…for an extension of the exemption under subparagraph (A)").
[6] 40 CFR 80.1441(e)(1) and (2) ("a refiner may petition…for an extension of *its* small refinery exemption") (emphasis added).

newer small refineries have the ability to consider whether they believe the establishment of the RFS program and its requirements will cause economic hardship before beginning operations. EPA believes this approach also avoids two possible negative consequences associated with any refinery exemption – an increase in obligations for non-exempt facilities or the use of less renewable fuel than EPA anticipated when it established the applicable percentage standards. Because Dakota Prairie was not covered by the original small refinery temporary exemption, it is not eligible to apply for an extension of that exemption.

Based on the above, EPA is denying Dakota Prairie's request to evaluate its petition for a one-year small refinery exemption from its 2015 RFS obligations. This means that as of January 1, 2015, Dakota Prairie's gasoline and diesel production are subject to the percentage standards of 40 CFR 80.1405, and Dakota Prairie is subject to all other requirements applicable to obligated parties. In addition, should Dakota Prairie produce renewable fuel and/or generate or acquire Renewable Identification Numbers (RINs), it will be subject to RFS regulatory requirements that apply to such actions.

If you have any questions, please contact Byron Bunker of my staff at (734) 214-4155.

Sincerely,

Christopher Grundler, Director
Office of Transportation and Air Quality

APPENDIX B

UNITED STATES COURT OF APPEALS
FOR THE EIGHTH CIRCUIT

Dakota Prairie Refining, LLC, Petitioner, v. United States Environmental Protection Agency, Respondent.	No.

CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1 and Local Rule of the Eighth Circuit 26.1A, Petitioner provides the following corporate disclosure statement:

Dakota Prairie Refining, LLC is a refiner of petroleum products. Dakota Prairie Refining, LLC is incorporated under the laws of North Dakota, and its principal office is located at 1250 W. Century Ave., Bismarck, ND 58503. Dakota Prairie Refining, LLC is 50% owned by WBI Energy, Inc. and 50% owned by Calumet Specialty Products Partners, L.P. WBI Energy, Inc. is not a publicly traded company. Calumet Specialty Products Partners, L.P. is a publicly traded company.

The Petitioner will file a revised corporate disclosure statement should it become aware of a change in corporate ownership interests that would affect the disclosures required by Rule 26.1.

DATED: June 10, 2016

PERKINS COIE LLP

By: _____

LeAnn M. Johnson (DC Bar No. 48640)
Albert M. Ferlo (DC Bar No. 290395)
PERKINS COIE LLP
700 13th Street, N.W.
Suite 600
Washington, D.C. 20005-3960
Telephone: 202.654.6209
Facsimile: 202.654-9943
LeAnnJohnson@perkinscoie.com
AFerlo@perkinscoie.com

Attorneys for Petitioner
Dakota Prairie Refining, LLC

APPENDIX C

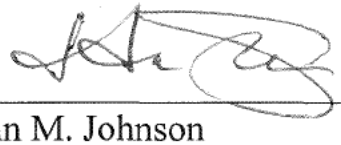
CERTIFICATE OF SERVICE

Pursuant to Federal Rules of Appellate Procedure 15(c) and 25, Local Rule of the Eighth Circuit 25A, and 40 C.F.R. § 23.12(a), I hereby certify that on June 13, 2016, I will cause Court-stamped copies of the foregoing Petition for Review and Corporate Disclosure Statement to be served by certified mail, return receipt requested upon the following:

THE HON. REGINA MCCARTHY
Administrator
U.S. Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

CORRESPONDENCE CONTROL UNIT
Office of General Counsel (2311)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

THE HON. LORETTA E. LYNCH
Attorney General of the United States
U.S. Department of Justice
950 Pennsylvania Avenue, N.W.
Washington, D.C. 20530



LeAnn M. Johnson
PERKINS COIE LLP
700 Thirteenth Street, N.W., Suite 600
Washington, D.C. 20005-3960
Telephone: 202.654.6209
Facsimile: 202.654.6211
LeAnnJohnson@perkinscoie.com

PERKINSCOIE

700 13th Street, NW
Suite 600
Washington, D.C. 20005-3960

+1.202.654.6200
+1.202.654.6211
PerkinsCoie.com

June 10, 2016

LeAnn Johnson Koch
LeAnnJohnson@perkinscoie.com
D. +1.202.654.6209
F. +1.202.654.9943

VIA OVERNIGHT MAIL

Eighth Circuit Court of Appeals
Thomas F. Eagleton Courthouse
111 South 10th Street
Room #24.329
St. Louis, MO. 63102

Re: Petition for Review

Dear Clerk of the Court:

Enclosed please find an original and one copy of a Petition for Review of a final decision of the U.S. Environmental Protection Agency. Please stamp and return the copy of the petition using the enclosed, postage pre-paid envelope at your earliest convenience. A check for $500 to cover the filing fee for the petition is also enclosed.

If you have any questions please contact Krista Hughes at 202-654-6309.

Very truly yours,

LeAnn Johnson Koch

Enclosures

ORIGINAL 36794

RECEIPT OF PAYMENT

— UNITED STATES COURT OF APPEALS —
for the
EIGHTH CIRCUIT
at St. Paul

RECEIVED FROM

Perkins Coie
700 13th St., NW, [redacted]
Washington, DC 2005

	GENERAL AND SPECIAL FUND
086900	Docketing Fees
322340	Sales of Publications & Opinions
322350	Copy Fees
322360	Miscellaneous (include certification fee)
510000	Judicial Services
6855AP	Admission Fee-Local Rule
086400	Special Funding
604700	Treasury Registry Fund

ACCOUNT	AMOUNT
510000	200 00
086900	100 00
086400	200 00
TOTAL	
Case Number or Other Reference	16-2692

All checks, money orders, drafts, etc. are accepted subject to collection. Full credit will not be given until the negotiable instrument has been accepted by the financial institution on which it was drawn.

100127

DATE	Cash	Check	M.O.	Credit
06 · 14 2016		✓		

DEPUTY CLERK: jmm

Message

From: enviroflash@epacdx.net [enviroflash@epacdx.net]
Sent: 9/20/2018 6:37:07 PM
To: Weihrauch, John [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=74d426b7439045d9a0a65b186ea68b21-Jweihrau]
Subject: EPA Updates RFS Website to Improve Transparency

Today, EPA updated the RFS public data web pages that include new data and information for both stakeholders and the public. The updated RFS website includes interactive and dynamic features that allow users to customize display of information.
New information includes:
-The number of small refinery exemption petitions received, approved, and denied for each compliance year;
-The weekly average price of Renewable Identification Numbers (RINs) traded; and
-The weekly volume of RINs traded.

The data are available here: https://www.epa.gov/fuels-registration-reporting-and-compliance-help/public-data-renewable-fuel-standard

****

Subject: Fw: Documents for SLJ
To: CN=Bill Wehrum/OU=DC/O=USEPA/C=US@EPA
Cc:
From: CN=Robert Meyers/OU=DC/O=USEPA/C=US
Submit Time: 2/21/2007 21:30:53

We put together this stuff really fast -- 3rd floor was pounding for a 400pm delivery time.

----- Forwarded by Robert Meyers/DC/USEPA/US on 02/21/2007 04:30 PM -----

Robert Meyers/DC/USEPA/US

02/21/2007 04:30 PM

To Betsy White/DC/USEPA/US

cc

Subject Documents for SLJ

Attached are 3 documents. Two documents are intended for 730 briefing. I have also attached the WH document for Principals in case this hadn't been previously transmitted to him

AFSSummary.doc AFSSummary.doc AFSUnresolved Issues for Alternative Fuel Standard.doc

AFSUnresolved Issues for Alternative Fuel Standard.doc AFSOpenQuesInternalDoc.doc

AFSOpenQuesInternalDoc.doc

Subject: Fw: Documents for SLJ
To: CN=Charles Ingebretson/OU=DC/O=USEPA/C=US@EPA CN=Bill Wehrum/OU=DC/O=USEPA/C=US@EPA CN=Michael Catanzaro/OU=DC/O=USEPA/C=US@EPA
Cc:
From: CN=Robert Meyers/OU=DC/O=USEPA/C=US
Submit Time: 3/1/2007 02:48:53

These are documents from last week

----- Forwarded by Robert Meyers/DC/USEPA/US on 02/28/2007 11:53 AM -----

Robert Meyers/DC/USEPA/US

02/21/2007 04:30 PM

To Betsy White/DC/USEPA/US

cc

Subject Documents for SLJ

Attached are 3 documents. Two documents are intended for 730 briefing. I have also attached the WH document for Principals in case this hadn't been previously transmitted to him

AFSSummary.doc AFSSummary.doc

AFSUnresolved Issues for Alternative Fuel Standard.doc AFSUnresolved Issues for Alternative Fuel Standard.doc

AFSOpenQuesInternalDoc.doc AFSOpenQuesInternalDoc.doc